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Internet voting and the secret ballot in Norway: principles and popular understandings

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ABSTRACT

The secret ballot is considered a central feature of democratic elections, but its practical implications may be contested when Internet voting (and remote voting in general) is introduced. How do citizens understand the principle of the secret ballot in practice? The issue was brought to the fore in a trial with Internet voting that was conducted in 12 Norwegian municipalities for the 2013 parliamentary election. Based on a representative population survey, we explore how Norwegian voters approached the principle of the secret ballot in the context of Internet voting. A large majority supported the general principle, but the picture became more nuanced when it was put to the test of concrete situations. Unless the situation involved coercion or undue influence, many people were willing to accept that voting can be observed by others – even if this was a breach of legal regulations.

Introduction

The secret ballot is largely undisputed as a democratic principle. What this principle means in practice, however, may be contested when voting takes place outside the polling station in a so-called uncontrolled environment, that is, remote voting (including Internet voting, postal voting and telephone voting). Remote voting transfers the responsibility for vote secrecy from the authorities to the voters (Vollan 2006; Buchstein 2015, 16). The popular understanding of the principle of the secret ballot, therefore, becomes crucial, because this may influence whether voters actually keep their vote secret.

The secrecy of the vote has two aspects (e.g. Barrat i Esteve and Goldsmith 2012, 28). First, it requires that voters are able to cast their votes in private, unobserved by anyone. Second, it requires that no one is able to break the anonymity of the vote at a later stage. Even though both aspects are important, we focus on the former. Voter attitudes towards the privacy aspect have received little attention in the literature on remote voting. Attitudes towards Internet voting are rarely studied (but see Alvarez et al. 2011), and popular understandings of ballot secrecy have, to our knowledge, not been explored

previously. The secrecy of the vote is usually taken for granted, and guestions about this issue are therefore rarely asked in surveys. When the Norwegian Internet voting trials brought questions about ballot secrecy to the fore, a rare opportunity to study attitudes towards this issue arose. Our approach in this article is therefore exploratory. The aim of the article is to examine how citizens understand the principle of the secret ballot in practice when Internet voting is introduced, and whether their understanding is in accordance with the legal understanding of the principle, by drawing on voter attitudes in Norway.

The first trial with Internet voting in Norway included 10 municipalities in the 2011 local election (see Segaard, Baldersheim, and Saglie 2012, forthcoming). Two years later, a new trial was held in 12 municipalities at the 2013 parliamentary election – the 10 municipalities from the 2011 trials and 2 new ones. More than 250,000 eligible voters had the opportunity to cast an Internet vote in 2013. The Internet voting trials were controversial, and a new government decided to discontinue the trials in 2014 (KMD 2014b). Even though there will not be any Internet voting in Norway in the foreseeable future, the trial experience may shed light on how voters understand the principle of the secret ballot in a context of remote voting.

In the first part of the article, we review and discuss the literature on Internet voting and the principle of the secret ballot. Second, we turn to the debate on Internet voting in the case of Norway as well as further details of the trials. Third, we use a representative population survey in the trial municipalities to explore public opinion on the principle of the secret ballot as well as Internet voting. Finally, we explore how citizens apply the principle of ballot secrecy to concrete situations; in the survey, we developed different scenarios and asked the respondents whether they perceived these situations to be acceptable or not.

Remote voting and the principle of the secret ballot

The principle of the secret ballot is almost universally accepted today, but it has been contested in the past. A philosophical debate about its value remains. Some authors (Brennan and Pettit 1990; Engelen and Nys 2013) argue that voting should be a public act. Building on a deliberative model of democracy, they claim that open voting makes citizens publicly answerable for their electoral choices. This will encourage voters to vote with the public interest in mind, whereas secret voting makes it easier to vote on the basis of self-interest. However, Brennan and Pettit (1990) admit that the possibility of bribery, intimidation and blackmail moderates their argument, whereas Engelen and Nys (2013) acknowledge that open voting may lead to conformism or withdrawal. This is, in any case, merely an academic debate today. The secrecy of the ballot has been enshrined in several human rights

instruments, such as the European Convention of Human Rights and the International Covenant on Civil and Political Rights (see, e.g. Watt 2003).

In this article we focus on how the principle of the secret ballot may be affected by Internet voting. To be precise, it is remote voting that may challenge the principle of the secret ballot. Estonia stands out as the only country in which all voters can use Internet voting - for local, national and European elections (Alvarez, Hall, and Trechsel 2009). Some other countries, such as Switzerland (Mendez 2010) and Canada (Goodman 2014), currently use Internet voting in parts of the country, at the local or regional level. In other countries, such as the UK, Internet voting has been piloted but not continued (Wilks-Heeg 2009). While Internet voting is relatively rare, postal voting is used in many countries, at least for some categories of voters (Massicotte, Blais, and Yoshinaka 2004, 132-137), and it is the main method of voting in some US states (Alvarez, Levin, and Sinclair 2012). Popular understandings of ballot secrecy are therefore relevant beyond the cases of Internet voting. The dilemma, in short, is that a system that is supposed to increase political equality, by increasing accessibility, may also damage the same equality, by giving one individual influence over more than one vote.

First, remote voting makes it easier to buy and sell votes. Vote-selling will be relatively limited when the vote-buyer is unable to control how the seller votes. When voting takes place outside of the polling station, the buyer will be able to witness that the seller votes according to the deal that was made.

Second, remote voting makes it more difficult to avoid undue influence – such as pressure from family members and others - when the votes are cast. As Birch and Watt (2004, 66–69) emphasize, power relations within the family may be unequal. Social norms within the family may differ considerably from the norms of the civic sphere. However, the distinction between undue influence and acceptable kinds of influence is not necessarily clear. Political discussions – also within the family – are beneficial from a democratic perspective. Convincing others is a natural part of an election campaign. But the mark is overstepped if family members watch how their spouse or adult children vote, to make sure that they vote for the "correct" party or candidate.

There are remedies to such problems, especially in the case of Internet voting. The opportunity to cast a new vote, if the first vote was cast under undue influence, is meant to solve the problem. However, sceptics argue that such technological solutions cannot guarantee adequate levels of secrecy (e.g. Birch and Watt 2004, 62). These measures may not work equally well in all social contexts. First, if someone influences a family member's vote, the voter who is subjected to pressure may not always have an opportunity to cast a new vote. Second, some level of engagement in the democratic process is required to undertake a new vote. A voter who has sold his vote will probably not bother to vote again, even though the opportunity is available. The same applies to voters who have been pressured

to vote for a specific candidate. If the initial political engagement is weak, the voter is less likely to make any special effort to cast a secret vote (Vollan 2006, 167).

A basic question is whether the secrecy of the ballot shall be regarded as a right or a duty. There appear to be two conflicting normative positions: some will maintain that both voters and the authorities must ensure that all votes are cast secretly, while others will say that the authorities have the responsibility to ensure a secret ballot and that the voter naturally has a right to a secret ballot – but not necessarily the duty to keep his or her vote secret.

According to Buchstein (2004, 52; 2015, 43-45), Internet voting represents a shift towards the latter position: that the secret ballot becomes a right, rather than a duty. It can be argued, however, that the state has to trust that its citizens are able to decide how they will cast their vote, and not interfere in their choices unless it is absolutely necessary. Such arguments were used when Internet voting was introduced in Estonia (Drechsler and Madise 2004, 102). In contrast, Buchstein (2004, 50-53) argues that mandatory secrecy must be maintained to protect voters from threats and pressure and to prevent buying and selling of votes.

However, some groups might be unable to vote in secret at the polling station. Persons with disabilities who need assistance to vote are, in practice, excluded from the right to ballot secrecy. Birch and Watt (Watt 2003, 199-200; Birch and Watt 2004, 62–64) discuss this question in the context of a ruling in the Irish Supreme Court. The court (as well as Birch and Watt) found that even though there was reason to depart from the principle of ballot secrecy in order to make it possible for certain groups to be able to vote at all, this is not a reason for departing from the principle in other contexts. It is nevertheless a dilemma that Internet voting may challenge the secrecy of the vote for some individuals, but at the same time give others - people with disabilities - the opportunity to vote in secret (see Fuglerud and Røssvoll 2012).

Finally, a US study (Gerber et al. 2013) reminds us that it is the voters' perception of the secrecy of the ballot, rather than the actual secrecy, that affects their behaviour. The respondents were asked whether they believed that anybody (such as politicians, trade unions or employers) could find out who they voted for. Between 25% and 40% of the respondents (depending on the question wording) thought that someone would be able to find out how they had voted. Accordingly, the degree of confidence in the electoral process is relevant for public attitudes towards the secrecy of the ballot.

The secret ballot and the Norwegian Internet voting trial

Norwegian elections are generally carried out in the so-called controlled environments: the authorities prevent outsiders from finding out how people vote. In practice this means that the election authorities shall ensure

that the voting booth is designed in a way that prevents snooping, and that no one follows the voter into the booth. Internet voting thus introduces an essentially new element to the Norwegian electoral system: voting in an uncontrolled environment. Admittedly, a very limited element of remote voting also existed before the Internet voting trials. Expatriates who do not have the possibility of visiting a Norwegian polling station abroad (e.g. an embassy) may vote by post.

The technical solutions offered by the Internet voting system might challenge the principle of the secret ballot if the authorities or others are able to find out how someone voted. Security mechanisms are supposed to prevent this, but most people cannot really comprehend how these mechanisms work. While the technological side of ballot secrecy has been discussed in Norway, the privacy aspect was more central in the political debate (Connolley 2012; Winsvold and Hanssen 2012). Family pressure and other kinds of undue influence as well as buying and selling votes were prominent issues in the debate. This was also the case when the 2013 trials were discussed by the Norwegian Parliament, and a narrow majority voted in favour of conducting the trials. The dispute was primarily about the principle of the secret ballot and to what extent it could be met in practice (Stortinget 2013).

The discussion of whether the secret ballot should be a duty or a right was also present in the Norwegian debate. For example, the then State Secretary of the Ministry of Local Government, Dag Henrik Sandbakken (2011), wrote (our translation):

Shall the authorities guarantee the secrecy of the ballot? Some people think that that we have a duty to guarantee secrecy; others believe that it is sufficient that we ensure that the voters' right to vote in secret is safeguarded.

This is, however, a normative statement rather than a legal one. The requlations for the Internet voting trials (§16 (1)) state that "Voters shall personally ensure that their Internet vote is cast in private" (FOR-2013-06-19-669, §16 (1)). The voter has a legal duty to maintain the secrecy of the ballot. Internet voting thus means that the responsibility to keep the ballot secret is, in part, transferred from the state to the individual voter.

The security mechanisms of the Norwegian Internet voting trials

The Norwegian Internet voting trials in 2011 and 2013 were largely based on the same principles and security mechanisms. Internet voting was a supplement to the paper ballot; it was still possible to vote in the traditional way. Internet voting was only permitted during the advance voting period, from 12 August at 9.00 am until 6 September at midnight. On Election Day, 8 and 9 September, it was only possible to vote by paper ballot at the

polling station. Voters were allowed to cast their Internet votes repeatedly in advance, but only the last Internet vote was valid. A paper ballot could be cast only once, either in advance or on Election Day. When a voter chose to use both methods - the Internet and a paper vote - only the paper version was valid, irrespective of whether the paper vote was cast before or after the Internet vote. These measures aimed to ensure that nobody but the voter should know which vote was the valid one, and thus prevent undue influence and vote-selling. If somebody was coerced to vote for a specific party, they could vote again and cancel the first vote.1

The regulations also specify other security mechanisms. The voter's opportunity to verify his/her vote was extended in the 2013 trial to improve the security system. In addition to verifying that the vote was registered correctly, it was also possible to verify that the vote was correctly stored in the database of the Internet voting system.² This part of the verification system was based on a return code and the so-called voter self-verification (for more details, see Carter Center 2014).

The 2011 Norwegian Internet election was evaluated by the International Foundation for Electoral Systems (IFES) in the light of the recommendations of the Council of Europe (2004) on electronic voting. The overall conclusion was that the Norwegian Internet voting system satisfies the Council of Europe's recommendations regarding secrecy both when the vote is cast and when the vote is subsequently stored (Barrat i Esteve and Goldsmith 2012, 28). The sufficiency of these mechanisms has nevertheless been guestioned in the Norwegian debate. Some scholars (e.g. Smith 2010) and politicians argue that Internet voting inherently conflicts with the secret ballot.

The outcome of the Norwegian trial

As shown in Table 1, 250,159 eligible voters were included in the 2013 Internet voting trial. The expansion from 10 municipalities in 2011 to 12 in 2013 meant that almost 80,000 more eligible voters had the opportunity to cast their vote via the Internet.

Due to the different context (a local election in 2011 and a parliamentary election in 2013), it is no surprise that the voter turnout in all municipalities was higher in 2013 than in 2011. However, what is more interesting is that a larger share of those who voted cast their vote via the Internet in 2013. This is the case for both the percent of the votes in general as well as the percent of the advance votes. Furthermore, the trial also led to an increase in advance voting. In total, 36.4% of the valid votes in the 12 municipalities

¹For more information, see the regulations for the Internet voting trial (FOR-2013-06-19-669).

²Thanks is due to Christian Bull at the Norwegian Ministry of Local Government for information about the changes in the i-voting system.

Table 1. Participation in the 2011 and 2013 Internet voting trials.

Entitled to vote (eligible voters)		Election turnout ^a %		Percent Internet voters among those who voted ^b		Percent Internet voters among those who cast their vote in advance ^b	
2011	2013	2011 ^c	2013	2011	2013	2011	2013
167,506	250,159	62.7	77.1	26.4	36.4	72.5	77.3

^aCalculated on the basis of voters crossed off in the electronic electoral roll.

were cast via the Internet. This is more than 77% of all valid advance votes in the trial municipalities.

Nevertheless, the fact that Internet voting was used by many voters did not lead to an increase in the overall turnout. Just as in 2011 (Segaard, Baldersheim, and Saglie, forthcoming), the change in voter turnout in the trial municipalities was in line with the change in voter turnout in the country as a whole (Segaard et al. 2014, 45-46).

Survey data and methodological design

Surveys were carried out in the trial municipalities in both 2011 and 2013, but we only use the 2013 survey in this article. We carried out a representative telephone survey in all the pilot municipalities based on a random non-quota sample of eligible voters (5006) from the Electoral Register. The survey was conducted in the weeks after Election Day (September-December 2013), and 2003 persons were interviewed. Some of the reasons for non-response are of such a nature that they may be excluded before calculating the response rate, for example, "wrong telephone number" and "not in the target group/illness and such". Consequently, the gross sample consists of 4417 persons, and the response rate is 45.3%. The questionnaire addressed items such as voter behaviour, perceptions and attitudes, political interest and sociodemographic characteristics, and it was similar to the one that was used in the 2011 study.³

Internet voting and the secrecy of the ballot: the voters' view

One study shows strong public support for Internet voting in Canada (Goodman 2014, 11), while another study shows that only a minority of US voters wanted to introduce absentee voting over the Internet (Alvarez et al.

^bThese figures are calculated after the cleansing process (i.e. the process to make sure voters get only one approved Internet vote, and that the Internet vote is annulled if the voter also has used a paper ballot). ^cCommon turnout rate for both the municipal council election and county council election. Source: KMD (2014a).

³For more details about the survey design, see Segaard et al. (2014).

2011). What can we expect in Norway? Norway is characterized by a high degree of confidence in the political institutions and mutual trust among the citizens (Listhaug, Aardal, and Ellis 2009; Newton 2001), and the two Internet voting trials have escaped any major scandals. It is within this context that voter attitudes towards Internet voting and their understanding of the principle of the secret ballot are analysed.

Attitudes towards Internet voting and the secret ballot

The 2011 survey showed that a large majority of the eligible voters in the trial municipalities had positive attitudes towards Internet voting and thought that it should be possible to vote via the Internet in Norway (Segaard, Baldersheim, and Saglie, forthcoming). These questions were also included in the 2013 survey, and the respondents' attitudes towards these statements are presented in Table 2.

Basically, the 2013 results were similar to those from 2011. A large majority of the citizens in the trial municipalities – 94% – agreed that it should be possible to vote via the Internet. More than 8 of 10 respondents had faith in the technology and reported they felt that Internet voting can be trusted. Even when the counter-argument – the principle of the secret ballot – was explicitly introduced, more than 80% did not agree that Internet voting should yield to this principle.

In short, there was not much resistance to Internet voting among the citizens in the trial municipalities. However, almost two-thirds of the respondents agreed that "casting a vote at a polling station has a value in itself". It is apparently possible to appreciate the solemn and ceremonial aspect of voting

Table 2. Attitudes towards the secret ballot and Internet voting in Norwegian pilot municipalities, 2013, given in %.

	Agree completely	Agree partly	Disagree partly	Disagree completely	N
It should be possible to vote via the Internet in Norway	84	10	2	4	1968
Today's technology is sufficiently secure to rely on Internet voting	50	33	9	8	1849
The principle of the secret ballot is so important that Internet voting ought not to be implemented	9	10	20	61	1893
Casting a vote at a polling station has a value in itself	40	23	14	22	1954
When one votes via the Internet, it should be done unobserved by others	63	19	10	8	1912

Note: The question order was rotated in the survey. Introduction to the questions: 'I will now read some statements about elections, and especially Internet voting. For each statement, please state whether you agree completely, agree partly, disagree partly or disagree completely."

^{&#}x27;Don't know/no answer' responses are excluded from the analyses.

without rejecting Internet voting, as Ødegård's (2012) qualitative study of voung voters in 2011 also showed.

The last statement in Table 2 shows that a substantial majority of the respondents agreed that Internet votes should be cast unobserved. Yet, 18% disagreed (completely or partly). There is widespread support for the norm of ballot secrecy, but there is also a group of voters who cares less about this principle.

One may object that most people lack the knowledge necessary to judge the security aspects of Internet voting and that they might not have thought through how Internet voting affects the secret ballot. It is nevertheless interesting to map public attitudes in order to gain a general impression of trust in the electoral process, the legitimacy of Internet voting and how a vote should be cast. Another objection is that some of the statements may be subject to yea-saying. Only two of the five statements in Table 2, however, are formulated in a way that might increase support for Internet voting. Thus, this objection does not alter the main conclusion: there was broad support for Internet voting in the trial municipalities, but also support for the principle of ballot secrecy.

How is the secret ballot understood in practice?

The normative question of whether the voter has a duty – in addition to a right - to vote in secret is disputed. According to Norwegian law, the voter has such a duty. But do the citizens agree with the law, or do they accept that a family can sit together in their living room to vote, as long as there is no coercion or vote-buvina?

Our aim is to explore what we call the grey zone between a secret ballot and a criminal offence. In this grey zone, we find situations such as a family sitting together on the sofa at home and casting their votes. Each family member can see how the others are voting, but there is no pressure to vote in a specific manner. This is hardly covered by the prohibitions in the penal code against undue influence and the sale and purchase of votes, but it does breach the principle of the secret ballot. It might not be a grey zone in legal terms, but it is in normative terms. The legal regulation that specifies that the voter must "personally ensure that their Internet vote is cast in private" may neither be respected nor enforced, unless the voters actually support this norm.

To explore how people view the "grey zone", we developed a survey battery with seven different scenarios describing situations that may arise when a vote is cast via the Internet. The respondents were asked whether each of these seven situations was acceptable or not. One of these situations is clearly covered by the prohibition against the sale and purchase of votes in the Norwegian penal code. Two situations are completely legitimate: they are not in conflict with the Norwegian Internet voting regulations. The five

remaining scenarios lie within what we have called the grey zone. They describe a breach of legal regulations, but not a punishable offence.

Two of the scenarios do not explicitly refer to Internet voting. They may also arise when a paper ballot is cast. The question was nevertheless asked in the context of Internet voting, and there is reason to believe that those who answered had Internet voting in mind. Table 3 presents the distributions of answers, sorted by the share of respondents who found the situation "completely acceptable".

One of the scenarios in the table was perceived as completely unacceptable by nearly everybody: that a voter sells his vote for NOK 1000. This is not only a punishable offence, but it is also seen as illegitimate by the citizens. But when we turn to the six other scenarios, public opinion is divided - and not necessarily in line with legal regulations.

A considerable majority, 85%, found it acceptable that a husband helps his weak-sighted wife to vote via the Internet, and thereby sees how she votes. More than 60% found it completely acceptable. It is easy to understand

Table 3. Perceptions of whether different situations are acceptable. Norwegian pilot municipalities 2013 given in %

	Completely acceptable	Partly acceptable	Partly unacceptable	Completely unacceptable	N
A husband helps his weak- sighted wife to vote via the Internet, and thereby he sees how his wife votes	61	24	6	9	1949
Two friends sit together and vote via the Internet. Both of them see how the other votes	40	22	11	27	1961
A mother helps her son to vote via the Internet, and thereby she sees how her son votes	36	27	14	23	1945
A daughter shows her old father how to vote for a specific party via the Internet ^a	35	22	15	28	1929
A daughter asks her mother which party she should vote for, and the mother recommends a party ^a	28	31	17	25	1946
A husband asks his wife to log on to the Internet and vote on his behalf. His wife does this	26	16	13	45	1963
A voter receives NOK 1000 to vote for the party of his colleague	1	1	2	97	1990

Note: Introduction to the scenarios: 'Now I am going to read some situations that may occur in connection with elections and Internet voting. Please state, for each situation, whether you find the situation completely acceptable, partly acceptable, partly unacceptable, or completely unacceptable.

^{&#}x27;Don't know/no answer' responses are excluded from the analyses.

^aLegal, according to the Norwegian Internet voting regulations.

why people accept this situation. Many people obviously think that it is better to be helped by the spouse than by a polling officer. However, according to regulations, a disabled person who needs help to vote must get this help from the polling officer - not from family members. This is simply not accepted by most people.

Neither are the next two situations – which were perceived as the second most and the third most acceptable – permitted by regulations. In spite of the strong support for the principle of the secret ballot, as seen in Table 2, a majority found it acceptable that two friends sit together and vote, and that a mother helps her son to vote and sees how he votes. The reason for this perception may be that we described these two scenarios as quite unproblematic, without any pressure or influence.

The fourth and fifth scenarios in the table are the only two situations that actually are permitted (marked with italics in Table 3). These two were accepted by a majority, but nevertheless accepted by fewer people than the first three. The scenario where the daughter shows her old father how to vote for a specific party via the Internet is permitted, because the daughter does not necessarily observe that the vote is actually cast. Furthermore, only 59% thought that it was acceptable that a daughter asks her mother which party she should vote for, and the mother gives a recommendation. In principle, this ought to be unproblematic, since the daughter takes the initiative in asking, and the mother does not know whether her daughter follows her advice. Surprisingly, 25% found this completely unacceptable. A possible explanation is that some respondents intuitively perceive this as some kind of undue influence.

The sixth scenario, in which the husband asks his wife to log on to the Internet and vote on his behalf (and she does it), was perceived as unacceptable by a majority. Public opinion appears to be more sceptical of a situation where someone completely leaves the act of voting to others, but 42% found this acceptable.

One may object that respondents were faced with these situations in a telephone interview without much time to think about them. The scenarios involve issues that many respondents may have never considered before. The answers probably express gut feelings, rather than carefully reasoned positions. The unanimous rejection of vote-buying nevertheless shows that the answers are far from random.

In short, the results indicate that the principle of ballot secrecy is challenged when it is put to the test of concrete situations. Citizens are sceptical of attempts to influence or pressure others, or letting others vote on one's behalf. When such elements are absent, many are willing to accept that voting is observed by others. This does not necessarily mean that they themselves would let anybody see how they voted, but indicates that a breach of the norm of ballot secrecy will not be met with social sanctions.

Conclusions: the secret ballot as a legal principle and a social norm

Even though the Norwegian Internet voting trials will not be continued, our survey has provided information - and raised some questions - about a central democratic principle: How does Internet voting (and remote voting in general) affect how the principle of the secret ballot is understood in practice? Remote voting raises some dilemmas which are relevant beyond the Norwegian context.

In the Norwegian case, public opinion is strongly in favour of Internet voting. At the same time, there is solid support for the principle of the secret ballot. To combine these two positions might be tricky, for citizens as well as policy-makers. Internet voting transfers, at least partly, the responsibility to safeguard the secret ballot from the state to the individual voter. The question is whether the voter is ready to accept this responsibility. The state may provide an elaborate set of security mechanisms to help the voter to keep his or her vote secret. The Norwegian authorities have provided security mechanisms for Internet voting that represent considerable progress, compared to postal voting. The fact that a paper ballot cast in a controlled environment always cancels previous Internet votes was a measure to ensure the secret ballot. There is still a question of whether the voters actually use these mechanisms when they are needed. This freedom of choice will not present a problem for most voters, but groups of vulnerable voters may be more exposed to undue influence than others or may choose to consciously sell their vote. Watt (2003, 205) describes this dilemma as "a balancing test between the convenience of the many and the possibility that some may be manipulated in the home".

Our focus has not been on these vulnerable voters, but rather on the "convenience of the many". When the general principle of unobserved voting is applied to concrete situations, many people are willing to accept that voting may be observed by others - especially in situations without any coercion or undue influence.

Vollan (2006) and Buchstein (2015, 16) argue that Internet voting may affect the political culture in a way that makes the secret ballot less of an absolute requirement. Our survey data support this argument and indicate that the popular understanding of ballot secrecy differs from the legal understanding. Regardless of legal regulations, people may ask why they should not be able to decide for themselves whether they want to cast their votes unobserved, as long as they retain freedom of choice. Internet voting may thus lead to social practices that differ from what is common when voting is carried out in the so-called controlled environments.

What are the implications for the future of Internet voting? Our answer would be that governments should consider the consequences when they decide whether they shall adopt Internet voting or remote voting in general. One possibility is to accept a less strict understanding of ballot secrecy and to adjust legal regulations to align with people's understanding. Another possibility is to refrain from the deployment of Internet voting technology in order to maintain the traditional social practices concerning ballot secrecy. In any case, the options and their effects should be thoroughly discussed.

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