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“E-voting: future issues”**

by

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2008 is a difficult year for electronic voting: e-voting systems have been dropped in the Netherlands, the Walloon and Flemish communities in Belgium are sharply divided over automatic voting, there has been a scandal over the reliability of *Premier Election Solutions* machines in the USA and the scheduled introduction of Internet voting has been delayed in New Zealand; only Switzerland and Estonia are keeping up their e-voting trials and development with some success.

Whatever form it takes, voting is definitely a *total social fact* in the sense Marcel Mauss¹ assigned to the term: it is a personal experience set in a political context whose meaning can be understood only with reference to social anthropology. If changes in voting arrangements are such a problem for all the stakeholders involved (designer, technicians, lawyers, elected representatives, citizens and others), it is because a whole range of interlinked socio-technical factors are folded into voting systems and become second nature to people over time. Voting is a political behaviour pattern connecting the individual to the group, a set of ideological conceptions, technical devices and social practices which have crystallised into a socio-technical complex. This crystallisation process becomes strongly entrenched in a country's political culture, and the history of its voting systems reveals the country's political ups-and-downs, its issues and its view of the citizens' position in the decision-making process.

So the advent of e-voting, first with automated voting then with Internet voting, cannot on any account be regarded as a mere "replacement" operation, as many technical operators offering automated voting systems have had people believe. Since voting technology carries its own share of political culture, any structural changes or practical developments in the technology inevitably question or even challenge the whole voting process itself. Owing to the central function of voting in modern democracies, any development in voting systems sparks fierce debates whose technical aspects all too often mask more fundamental political and social issues.

The purpose of this presentation is not to offer a summary of the international rules in force or of the massive amount of conflicting research on e-voting. However, after a decade of studies and disputes on automated and Internet voting, the stakeholders' and general public's thinking has evolved, leaving a number of unresolved issues which are nevertheless essential if we are to make progress with the upcoming transformation of voting systems. I do not claim to be exhaustive here, but I believe there are still several critical issues to be discussed.

1. The reliability of voting systems

Voting machines and all the software used to operate them are a flourishing industry on several continents², offering commercial services and owned by large groups which sometimes have close ties to political parties³. Over the past ten years, instances of reliability faults (especially among Diebold and Nedap machines) have sparked reactions of rejection

¹. Famous French anthropologist who coined the concept of "total social fact" in his major work, *The Gift* (1923).

². Examples include Nedap in the Netherlands, Indra in Spain; Premier Election Solutions (formerly Diebold Election Systems), Election Systems and Software (ES&S) and Unisys in the United States; CMC Limited, a subsidiary of Tata, in India; and Siemens, Telecom Italia and so on.

³. This was the case with Diebold and the Republican Party.

among those sections of the population which are nonetheless keenest on the development of information technologies: educated, well-off people, some of whom are even computer specialists. Distrust has also been fuelled by a sometimes extremely unfortunate communication policy: the machines' deficiencies have sometimes been denied, or admitted late in the day, as recently happened with Nedap and Premier.

The importance assumed by technology in the new voting systems compels democracies to address the sensitive issue of how to organise relations between private enterprise and the state in a new political and economic context. At the end of the day, what is involved here as in other areas is the recurring problem of how to strike a balance between the requirements of manufacturing secrecy and the transparency of public systems. The acrimonious debates between the advocates of open source and industry are simply one example of this in the broader context of reorganising the basics of capitalism in the digital era.

Compromise solutions allowing firms to secure a return on their research investment while ensuring transparency for the general public by publishing source codes and standardising the systems inevitably reflect broader social negotiations and shape different socio-economic models. What is at stake here, at a deeper level, is the choices to be made on the forms of liberalism and social democracy to which populations aspire. Certification and public supervision systems that go further than the ISO/IEC 9126-1:2001 "Software Engineering – Product Quality" standard will undoubtedly be necessary in order to achieve greater transparency and reliability.

2. The secrecy of the ballot

Over and above the specific security problems that might be caused by remote hacking into the machines, the question of the secrecy of the ballot (which arises only for Internet voting or for people with disabilities who need assistance) becomes acute, since secrecy cannot be guaranteed. The fear of social pressure is a cogent argument against remote e-voting which is regularly brought up. It can be viewed as an indicator of democracies' confidence in their own citizens and their judicial systems. Remote voting presupposes that democratic practices are considered to be sufficiently entrenched and protected, particularly by a body of legislation, for it to be introduced. It is significant that Switzerland is the most advanced country in this respect and that France is so little prepared for it and still refuses to introduce postal voting. Remote voting can also be a militant act and a democratic demand, as in Estonia. The technical solutions offered (such as the possibility of changing one's vote) in fact beg the more basic question that needs to be addressed: whereas the citizens have to rely sometimes blindly on voting devices and on the institutions supervising them, why don't democratic systems also have greater confidence in their citizens and in the fact that the latter have adapted to democratic practices, and consequently introduce remote voting arrangements? Establishing mutual trust, with appropriate legislation, should be the subject of a public debate which is still largely lacking.

3. Data protection

This is one of the blind spots in the debate on e-voting. The gradual introduction and the use of electronic identity cards for identification purposes under a wider e-government procedure (in other words, not only for voting) presupposes the existence of computer files providing central government authorities with an amount of information unparalleled in the history of societies. Yet in very many countries, legislation on the protection of personal data is still

minimal and independent mediation bodies⁴ are still in their infancy. Given the current context of security concerns, which inclines towards central government control over the circulation of personal data, and the unprecedented information technology resources now available, the Council of Europe as a whole would do well to embark on an in-depth discussion of the subject.

The prospect of setting up centralised registers of voters and votes, the fact that personal data circulates on networks and the growing number of computer files for judicial, military, school and health purposes should prompt democracies to reflect on the basic conditions governing the free exercise of that elementary right – the right to vote. Here again, in order to safeguard the anonymity of voting and protect members of the public when these computer files are compiled, rules must be established on ethics and transparency despite the possible reluctance of both governments and private firms.

Of course, the above remarks do not amount to a comprehensive discussion of the current issues; they focus on points that have been inadequately debated on the subject of e-voting. There is a great deal more to be said about making systems secure, about their accessibility and usability and, even more basically, about their relevance!

Changes in the forms of e-voting are closely linked to changes in democracies: altering the material arrangements for voting challenges our entire democratic culture. We have the technologies at our disposal, but what do we know of the model of democracy we want for the future? That is where the real issues lie.

⁴. In France, the data protection authority *Commission nationale informatique et liberté* helps to define the legal requirements to be met by e-voting systems in order to protect personal data, but it has a purely advisory function.