Artificial Intelligence and Electoral Integrity

The Council of Europe's Acquis and the Principles at Stake

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My presentation is on the standards and principles governing the use of artificial intelligence (AI) in elections. I will not discuss the question whether the use of AI should be seen as a positive of negative phenomenon. We have to face the presence of AI systems in the future anyway, as we are getting to digital technologies in other areas of our lives and have to get the best out of technological inventions everywhere. It is not only up to the EMBs to decide on the use of technical inventions. As there are many areas where the role of the election organizer is to efficiently control the candidates or political parties during the campaign or to tackle election fraud on election day, the use of AI by the private entities or in some cases by foreign countries may require the use of corresponding technologies in order to better understand the activities to be controlled. Thus, if the political parties use AI to better manage campaigning, AI is important also to tackle misinformation and disinformation, allow voters to get access to balanced information and control the financing on campaign as well.

At the most general level, we can discuss about principles like human dignity and human rights, such as personal freedom, right to free speech, right to establish or join political parties and electoral rights. There are well-established international standards on holding elections, such as the Venice Commission's Code of Good Practice in Electoral Matters, Guidelines on Election Dispute Resolution, on political party financing and control. AI may lead to requirements of amendments of these principles. It is a bit early to assess how far these changes might be required, but especially on the details we may see some amendments coming. Some principles have to be addressed in more detail, e.g. protection of personal data. The Venice Commission has adopted documents on Digital technologies and elections (CDL-AD(2019)016). Council of Europe has adopted recommendations which will be discussed more in detail later during the Conference (Recommendation CM/Rec(2020)1 of the Committee of Ministers to member States on the human rights impact of algorithmic systems; a mre specific one the Recommendation CM/Rec(2017)5 of the Committee of Ministers to member States on standards for e-voting). We have the Convention for the Protection of Individuals with regard to the Processing of Personal Data (Convention 108+), EU CGPR and restrictions on wide use of personal data, especially in relation to voter lists and candidates' personal data.

The areas where we shall probably see a need to further develop general principles and find a balance between the efficiency we may get by the use of AI systems and the core values of human rights and democratic elections, could be following.

1.   Universal suffrage

There is already a trend to accord the right to vote to citizens residing abroad. The importance of residence is less important in taking part in the democratic decision-making as the public information is spreading over the web and social media, campaigning takes place more and more online. Citizens residing abroad could be widely allocated the right to vote in parliamentary elections.

There are currently no specific requirements related to short time travelling. We have a report of the Venice Commission (CDL-AD(2015)040) on voting de facto abroad. Voting in any place the voter is during the elections can be practically possible with technologies allowing better verification of the voters' identity, allow participation without ID documents by using voter's biometric data, and protect at the same time from multiple voting. With these technologies, voters do not have to vote in one specific polling station and may participate anywhere. Polling station can become to a larger extent mobile. Voting at home could be allowed more widely. Better access to voting can be organized thus in the hospitals, health care centers, nurseries etc.

AI may also be used to protect the secrecy of the ballot box during a longer period of voting and the elections can be prolonged to several days.

AI may be widely used to control the accuracy of the voters' lists. Some processes done currently by human persons may be afforded to AI and such control can speed up the processes during the elections.

Many of us know the difficulty to verify the signatures collected in order to present some candidates or candidates' lists or during the referendums. Based on current principles, checking of signatures must be governed by clear rules; the checking process must in principle cover all signatures; validation of signatures must be completed by the start of the election campaign. This technical work can be efficiently done by AI.

At the same time, such processes require a shift in observing elections and some additional guarantees may be required in relation to personal data protection (voter identification, signature verification, etc.). Additional standards would be relevant to guarantee the secrecy of vote in different facilities used for voting or to guarantee the inviolability of the ballot box.

We have to discuss also the issue of control whether the lists of voters having participated in elections are correct and not manipulated. The Venice Commission has adopted an interpretative declaration on this topic. AI may be used to check this issue, e.g. by managing the voter identification. Thus, such lists can be kept more easily secret and anyone denied access to these lists.

2.   Equal suffrage

With regard to equal voting, current technologies can be used in order to avoid double voting. For example, it is possible to keep the voters' registers and list of voters who have voted online in real time, so it is possible to check whether the voter has already voted in any polling station. Voter identification mechanisms such as biometrics can be used. AI may help in voter identification even if the voter uses other person's documents; requirement to bring ID documents to the polling station can be replaced by other methods of voter identification.

It may be interesting to see whether it could be possible to track the voters in anonymized way in order to get information on where most voters go in their local areas, where the polling stations could be suited the best in order for them being accessible without difficulties. AI could be used to decide on the locations of polling stations or the places where to address the voters during the campaign. These methods have to be considered carefully to avoid harming of privacy and protecting the personal data.

AI may be used to decide on redistricting or delineation of constituencies. The boundaries may be drawn based on complex criteria such as the places voters usually live, work or go; which places voters tend to associate themselves with or in which territories voters with similar cultural identity converge. Such exact criteria may be left for the AI to decide on.

3.   Free suffrage

A lot can be done by using the AI systems in order to protect the free suffrage. First, in relation to campaigning, the AI systems can be used to control the access to free media and balanced information, tackling political parties or other interested persons from pre-select news and micro-targeting voters. AI can find out malicious information campaigns, distribution of misinformation and false information. AI may be used to better target voters with important information on electoral processes or better share the reports on connections of political parties with lobby groups or financing of parties and candidates. AI may be used to assess the financial reports or candidates' equal of access to media. See also Recommendation CM/Rec(2022)12 of the Committee of Ministers to member States on electoral communication and media coverage of election campaign.

AI may be used also to find the best solutions to bring more voters to the polling stations, using the data to assess, which policies, procedures or lack of information restricts more voters to participate in elections.

4.   Secret suffrage

AI may be used widely to find best solutions to protect the secrecy of vote, but also help participating those voters who need assistance in filling in the ballot papers. Use of voting machines and online voting mechanisms have been limited due to the issues of secrecy of vote, but AI technologies may give us a different perspective by providing some solutions which could be widely accepted. Still, it has to be kept in mind that AI technologies can be used also to violate the secrecy of vote. The work in this area, even if we keep using paper ballots, has to be continued as AI may be used to personalize any ballot paper or to take note of persons participating in elections. EMBs have to use technological inventions in order to tackle more advanced mechanisms to undermine the secrecy of vote.

5.   Procedural guarantees

The Code of Good Practice in Electoral Matters and its counterpart on referendums foresee impartial electoral commissions, multi-level organization and mechanisms for complaints and appeals. All of these principles may require some reforms if the AI systems are introduced in elections.

It is clear that the decisions on where and how to use AI have to be done impartially and as recommended independently. The composition of the central commission requires though substantially higher level of knowledge on IT systems. In order to have sophisticated decisions and actions by the AI, one (central election commission) has to be able to ask the right questions, make the right orders to the AI.

As much of the work can be done by the means of AI and human factor will become less relevant especially on lower level (e.g. counting, voter identification etc.), the independence of the central election management body becomes more important and the local commissions less important. Some of the assessment of the legality of the work by local commissions may be relied on the AI, as well as reporting to the central EMB.

AIs may be used to support the accounting of the EMBs, like publishing protocols online, providing campaign finance reports and audits.

If the actions by the AI systems are under doubt, the complaint procedures may be difficult to manage without very specific know-how. Courts possessing knowledge on general constitutional law and election law may need special experts to decide on these complaints and appeals. At least some of the complaints may be decided by AIs. A complaint and appeal mechanism where one AI controls the other AIs is possible, but not realistic. Some actions by the AIs may thus become in the future non-appealable.

On the other side, trust in the electoral processes may suffer a lot by the use of AI. Certainly, we can see a decrease of the human factor, but centralization of the processes to one AI may lead to

suspicions, conspiracy theories and general loss of trust. The distinction of election organizers in the EMBs has to be very clear from the ruling parties. Observation will become much more technical and not accessible to everyone. The whole society will have to trust some experts who claim to be independent experts and observers. It is inevitable that to some extent many political groups may claim that they have the best level of expertise to assess the work of AI systems, and competition will be between such claimed experts, some of them claiming the elections being unfair and partial. This topic will become part of election campaign. AI systems used have to be transparent and observation mechanisms available. All software used in the AI, the human input, has to be signed digitally and the content of it has to be accessible to public as far as security issues allow. Efforts have to be made to protect the AI systems from malicious attacks or manipulation.

Training the observers has to be reconsidered to a large extent. It is unimaginable that everyone could observe electoral processes based on some short training as it is currently possible. The use of AI leads to a very high level of complexity of elections and requires the observers to be able to follow the criteria for the use of AI, input to the AI and request for a result, as well as the technical construction of the AI system (programs, methods, software etc). The number of observers would be widely limited to just a few, having university degrees on AI systems. It would limit both the possibilities of political stakeholders as well as wide public to understand the electoral processes in detail.

Lastly, I would draw attention to the issue of principles at stake with regard to the level of intelligence of the AI systems. If the AIs get more sophisticated than humans, we may find us in a situation where we do not decide on the electoral principles or topics AI can or may be used. The decision on electoral standards or principles or even the need to have democratic decision-making among humans may then depend on the AI's decisions. With the rise of the level of artificial intelligence (especially above human intelligence), we might see a need to reconsider first many principles governing election management, later on even the system of government. Separation of powers is intended to avoid misbehavior of public office; a system where different AIs control each other may not be realistic. In electoral processes, a complaint and appeals procedure may become irrelevant.