

Inquiry into the impact of social media on elections and electoral administration
Electoral Matters Committee | Parliament of Victoria (Australia)

Submission of evidence by Professor George Loukas, University of Greenwich

Professor George Loukas
Department of Computing and Mathematical Sciences
University of Greenwich
London, UK

Dear Mr. Lee Tarlamis, Chair of the Electoral Matters Committee,

Thank you for the invitation to submit evidence. Please see below my response. I first discuss the two problems I have prioritised and then recommend corresponding solutions.

What problems have you seen with social media and online advertising around elections?

The lack of transparency has become a significant problem because of two socio-technical challenges:

- (i) **Who and when will be recommended a particular advert is determined via machine learning.** This means that the social media user, the legislator, and to a large extent the social media platform's developers themselves, cannot know with certainty why a particular advert was recommended to a particular user at a particular point in time. The opaqueness introduced in this manner depends on the particular type of machine learning used. The more accurate the targeting provided by a machine learning algorithm the higher the likelihood for the user to "click" and generate advert income. However, generally the more accurate types of machine learning tend to also be the less transparent and the less explainable. This is beginning to change as the scientific field of "Explainable Artificial Intelligence" has had remarkable results in recent years. In fact, Google and Facebook market themselves to advertisers as pioneers in explainable AI technologies whereby the result of machine learning can be explained to good extent. However, this explainability is not provided to the user, but only to their own developers and to their advertisers.
- (ii) **There is no means for the social media users to find out themselves who is behind an advert.** Naturally, social media platforms cannot be inherently trusted and their business model can be seen as the source of the problem itself. So, legislation can potentially force a social media platform to disclose the source of a particular advert, but still a user will not be able to independently verify this. Adding further power to the social media platform cannot be considered as a solution to a problem that has been created in the first place by the concentration of power on these platforms. Verification of the source needs to be possible to be carried out independently and ideally by the users themselves.

What are the most effective ways to address any problems with social media and online advertising around elections?

- (i) **Through legislation, social media platforms can be requested to display to the user why they served a particular advert.** The advent of explainable AI and the fact that the social media platforms themselves promote it for their advertisers is a prime opportunity. If an advertiser can now be technically allowed to know why a particular group of users received a particular advert, then the user should also be shown this information. Naturally, I do not recommend that the social media platform will display the complete set of features used by their algorithms to provide a recommendation. Instead, an indication of what was the general category of a user's characteristics that mattered the most in the recommendation is certainly realistic and can be implemented. Social media platforms are already implementing modifications in response to what they themselves deem as misinformation. Displaying their algorithm's rationale for the choice of advert served is not more difficult.
- (ii) Knowing the sources and intermediaries in political advertising can be considered as critical as knowing the source and intermediaries in our food and drugs distribution. For the latter, several technologies have been developed to accompany regulations and help verify the source of food and drugs interdependently. For political advertising, this is simpler because the supply chain is shorter and there are no physical objects involved. As such, **there is no technological excuse preventing adverts from carrying a digital imprint.** This is already progressing in the UK.