Letters to the Editor

Biases may invalidate any conclusions drawn on voters' behaviour

From Daniel Aronoff, Cambridge, MA, US

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Sir, Gillian Tett writes of the new and potentially nefarious use of Big Data to peer more deeply into the underlying causal factors that determine our choices in order to influence elections ("How big data rewrote the political message", September 30).

The narrative is intriguing, but these methods may be less effective than they appear.

Ms Tett recounts how, in the first stage, Cambridge Analytica mines micro data on people's behavioural attributes so as to partition them into groups defined by common psychological attitudes. There are myriad potential problems. The attributes defining the groups were pre-selected by the researchers and may not accurately reflect the groups with common outlooks that actually exist. The people who took the surveys, whose behavioural attributes form the criteria for placing the rest of the population into groups, were not chosen at random and therefore are not necessarily representative of the rest of the population. The self-reporting of the surveys may also suffer from biases (people say one thing and do another). These features may create biases that invalidate any conclusions reached from the surveys.

In the second stage, when the different groups are assigned political interests, we do not know how different members of a particular group may rank the set of concerns — particularly novel issues

that arose after the surveys — that are most important to the group, nor do we know if the group affiliation may change over time. We also do not know what sort of statistical testing of the model has been undertaken and what the results are.

It seems far more likely that Donald Trump won the US presidential election because he happened to be the candidate who appealed to large numbers of people whose concerns were not being addressed by other candidates. And it is certain that Mr Trump did not devise his message in response to any Big Data model.

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