Ethical Issues in Algorithms

In the paper "The Ethics of Algorithms: Mapping the Debate", Mittlestadt et al. broadly discuss the ethical issues raised by algorithms. In line with the reasons listed in the paper, I believe that incorrect selection of data is one of the major reasons for bias which in turn leads to the epistemic and normative ethical concerns, especially in case of learning algorithms. Evidences drawn from data with a high degree of selection bias will be inconclusive, inscrutable and misguiding. For instance, in our Data Science project, where we were testing the hypothesis if the Hermès Birkin bags show a discernible price trend in the luxury handbag market, we found that these bags outperformed every other brand according to our machine learning models. However, it was ambiguous to say whether we proved our hypothesis as the data set had over 60% Hermès bags, thereby creating an inherent bias.

Another major reason for an algorithm to be biased is the social factor, as the paper rightly points out. It wasn't until 2020 that Google recognized its voice assistant algorithm's failure to understand and comprehend people with Down syndrome. As part of Project Understood, Google now works with people having atypical speech patterns to avoid intelligibility issues. Though unintentional, this is also an example of 'data-driven discrimination'.

Moreover, it is imperative to hold someone/something accountable for the actions and consequences of the algorithms. This is where the 'traceability' concern comes into picture. While no one has '*enough control over the machine's actions*', we have to emphasize on the moral responsibility of these learning algorithms. Be it the debate surrounding Tesla's autopilot accidents, or the recent incident where a robot chess player broke its opponent's finger during a match at Moscow Open, the related algorithms clearly made some incorrect real-time decisions. However, I do not completely agree with Friedman and Nissenbaum who argue that '*developers have a responsibility to design for diverse contexts*', because one can only consider so many contexts when you are living in a dynamic ever-changing world.

Consequently, in his paper "Why we need better ethics for emerging technologies", Moor correctly states that there are situations where we do not have policies to guide us, thus creating policy vacuums. I agree with Moor that there would be an increase in ethical issues as technologies converge. For instance, consider hyper-connected homes. These are based on convergence of technologies such as AI and IoT. Such smart homes have multiple devices connected through a network, which generate data from voice recognition systems, video cameras, GPS etc. This data not only contains personal information about the user, but also the pattern and preferences of living. Such technological convergence leads to ethical concerns about regulatory issues, digital privacy, and data security.

The Gartner hype cycles from the last couple of years predict some of these technologies to mature, i.e., reach the power stage as outlined by Moor, within the next 2-5 years, but puts digital ethics, customer data ethics, and digital security in the nascent stages of the hype cycle, with these reaching maturity in the next 5-10 years. As the paper suggests, it is, thus, evident that we need to be proactive in formulating ethical theories and policies around these technologies or we would be left with numerous policy vacuums in the years to come.