RESPONSIBILITY IN ALGORITHMIC PRACTICE: HOW DATA SCIENTISTS WEIGH PUBLIC VALUES

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Abstract

Public sector organisations are increasingly using algorithms, which have long been praised for their potential to increase efficiency and effectiveness, and decrease the influence of human bias. Critics of this positive view, however, have since begun to show that algorithms are 'value-laden' rather than neutral, and irresponsible use can have disastrous real-life consequences (e.g. Martin, 2018).

Attention for public values in the entire process is an important prerequisite for the responsible implementation of algorithmic systems in the public sector. Such values are often incompatible or incommensurable in nature, as is the case with classic trade-off between privacy and security (e.g. de Graaf et al., 2016). Weighing public values and solving the so-called value-conflicts between them is a given in the public sector, and should be a given in the implementation of algorithms.

Following Wieringa, we regard algorithms not as technological artefacts but rather as sociotechnical systems that can be regarded from different perspectives. (Wieringa, 2020). This makes it difficult to determine who is responsible for making the value-decisions mentioned above. Some authors (most commonly inspired by Bovens and Zouridis, 2002), have implied that decision-making power has shifted increasingly to data scientists and developers, making them responsible for the safeguarding and incorporation of public values in algorithmic systems. We are, however, not aware of any empirical studies on how data scientists give meaning to this

"discretionary power" and how they weigh and incorporate public values in their day to day work.

In order to bridge this gap in knowledge, our research question is: *In what ways do data scientists in the Dutch National Police weigh and integrate public values in their work?* The research focuses on use of algorithms by the police, where algorithm use has great potential, but also a profound real-world impact and is under constant public scrutiny.

We conduct qualitative interviews among data scientists working on a wide variety of projects in the Dutch National Police to increase our knowledge of how value-decisions are made by these actors, what types of information they rely on in making their decision, and what factors influence this (e.g. personal background, other actors within in the sociotechnical system, rules and regulation etc.). We believe that such understanding can help us direct efforts to protect public values in algorithm use in the future. In this paper we thus aim to contribute not only to the academic literature, but also give the public sector practical insights to aid them in achieving responsible implementation of algorithms.

Literature

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