Understanding the Impact of Transparency on Algorithmic Decision Making Legitimacy

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Abstract. In recent years the volume, velocity and variety of the Big Data being produced has presented several opportunities to improve all our lives. It has also generated several challenges not the least of which is humanities ability to analyze, process and take decisions on that data. Algorithmic Decision Making (ADM) represents a solution to these challenges. Whilst ADM has been around for many years, it has come under increased scrutiny in recent years because of concerns related to the increasing breadth of application and the inherent lack of Transparency in these algorithms, how they operate and how they are created. This has impacted the perceived Legitimacy of this technology which has led to government legislation to limit and regulate its use. This paper begins the process of understanding the impact of Transparency on ADM Legitimacy by breaking down Transparency in Algorithmic Decision Making into the components of Validation, Visibility and Variability and by using legitimacy theory to theorize the impact of transparency on ADM Legitimacy. A useful first step in the development of a framework is achieved by developing a series of testable propositions to be used in further proposed research regarding the impact of Transparency on ADM Legitimacy.

Keywords: ADM, Algorithmic Decision Making, Transparency, Legitimacy