Chapter 10
Algorithmic Governance and Its Transformative Role in Decision-Making

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ABSTRACT

This chapter explores how algorithmic governance, also known as "algocracy," has become a key force in decision-making today. It examines how algorithms have evolved from simple tools of convenience to essential parts of how both public and private sectors operate. Tracing their historical roots, the chapter highlights algorithms' role in shaping regulatory frameworks and discusses their societal implications, particularly around transparency, accountability, and potential biases. By analyzing concepts such as "algorithmic governmentality" and "algorithmic regulation," the chapter unpacks both the benefits and ethical challenges these systems bring, highlighting their transformative impact on governance structures.

INTRODUCTION

The emergence of algorithms as key instruments in governance has redefined decision-making processes in contemporary societies. With advancements in computing and big data, the role of algorithms extends beyond computational tools; they have become crucial in governing and regulating both individual and societal behaviors. This chapter explores the concept of algorithmic governance—often referred to as "algocracy"—and delves into its historical origins, its role in regulatory frameworks, and the profound social implications it has introduced. As algorithms

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continue to permeate public and private sectors, understanding their impact on governance and society is essential for addressing the ethical, political, and practical challenges they pose.

With the rise of technological developments specifically in computing and dataism, algorithms have been an indispensable part of governance both in the process of designing, operating, and evaluating policies and analysing the system. As a natural result of this coalescence, the rise of algorithms in governance has been accompanied by a proliferation of terms that describe this phenomenon, including "algorithmic governmentality" (Rouvroy et al., 2013), "algorithmic regulation" (Yeung, 2018), and "algorithmic governance" (Gritsenko & Wood, 2020). While these terms are not identical, they share a common theme: algorithms are not just tools of convenience but have become central to the operation and evolution of governance systems.

This chapter begins by discussing the rise of algorithmic governance and its historical roots, with an emphasis on the evolution of algorithms from simple mathematical procedures to complex systems that now underpin major social and political decisions. This is followed by a discussion on the regulatory frameworks shaped by algorithmic governance, highlighting the benefits and challenges of such systems. Finally, the chapter will address the societal impacts of algorithms, with particular attention to issues of transparency, accountability, bias, and discrimination in the context of public and political life.

THE RISE OF ALGOCRACY

The term "algocracy" was first introduced by Aneesh (2002) to describe the increasing reliance on algorithms for governance. Even though there have been many claiming algocracy is the software version of bureaucracy, Aneesh (2009) stated that "there is no common meta-language shared by bureaucratic (legal code) and algocracy (binary code) systems of governance" (p. 355). In his view, algocracy represents a fundamental shift from traditional forms of bureaucratic governance, which relied on legal and hierarchical systems, to a new form of governance based on the execution of binary code. Unlike bureaucracy, which is characterized by structured legal codes and procedures, algocracy operates through algorithms that are capable of processing large amounts of data to produce decisions and outcomes. Therefore, he argues that this shift is transformative because algorithms do not operate within the same normative frameworks that govern human decision-makers.