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ALGORITHMIC GOVERNANCE AND THE IMPACT OF ARTIFICIAL INTELLIGENCE ON SOCIAL CONSCIOUSNESS: A SOCIO-PHILOSOPHICAL ANALYSIS

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Abstract

This thesis examines the emergence of algorithmic governance, the characteristics of reactive and predictive models, and the potential effects of AI-assisted decisions on social consciousness and individual freedom. Algorithmic transparency, the responsibility gap, and human oversight are considered from a socio-philosophical perspective.

Keywords. algorithmic governance, artificial intelligence, social consciousness, reactive systems, predictive systems, transparency, accountability.

Governance has been one of the integral functions of human society since its emergence. In a general sense, governance refers to the process of purposefully directing, coordinating, and controlling the activities of a particular system, such as a society, organization, or community. From a philosophical perspective, governance represents a mechanism for resolving the dialectical contradictions between “order” and “disorder,” as well as between “freedom” and “obligation.” In antiquity, Aristotle regarded politics as the highest form of governance and associated it with the natural aspirations of human beings. Plato, meanwhile, advanced the idea of wise governance by philosopher-kings in his conception of the “ideal state.”



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In sociology, the concept of governance differs from the traditional concept of government. While government primarily relies on state institutions and their formal authority, governance represents a broader system of interactions among the state, the private sector, and civil society. According to the British political scientist R. A. W. Rhodes, governance involves “self-organizing networks arising from interactions among interdependent yet autonomous actors” [1]. This approach interprets governance not merely as a top-down system of command and control but as a horizontal, multilateral, and dynamic process.

The principal functions of governance include:

- Goal setting – identifying the short-term and long-term objectives of a system;
- Planning – determining in advance the resources and actions required to achieve established objectives;
- Organization – defining roles, responsibilities, and relationships;
- Coordination – harmonizing the activities of different components of a system;
- Control and evaluation – comparing actual outcomes with established objectives and implementing necessary adjustments.

For centuries, these functions were performed primarily by human actors, including leaders, managers, government officials, and councils of elders. However, beginning in the second half of the twentieth century, and particularly during the twenty-first century, a substantial proportion of these functions gradually began to shift toward automated systems, algorithms, and artificial intelligence. This transformation led to the emergence of a new phenomenon known as algorithmic governance.

Algorithmic governance refers to a system of decision-making, resource allocation, behavioral monitoring, and regulation based on computational algorithms, big data, and artificial intelligence. This form of governance differs fundamentally from traditional human-centered governance in several respects.



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Speed: Algorithms can make millions of decisions within fractions of a second, whereas human beings possess limited cognitive capacities.

Data-processing capacity: Algorithms can simultaneously process terabytes of information, while humans can consciously analyze only a limited amount of data.

Personalization: Algorithms can generate decisions tailored to the behavior of individual users, such as personalized advertising or content recommendations.

Prediction: Based on historical data, algorithms can predict future behavior, including purchasing decisions, voting behavior, and even the probability of committing a crime.

Continuity: Algorithms do not experience fatigue, require rest, or undergo changes in mood. They operate consistently according to predefined criteria.

The main types of algorithmic governance systems are as follows.

1. Reactive Systems: Responding to Events After They Occur

Reactive governance focuses on addressing problems after they have emerged. Such systems are activated following a particular event and respond according to predefined “if-then” rules. Traffic lights, fire alarm systems, and traditional police patrols are common examples of reactive systems.

The principal limitation of this approach is that action is taken only after damage has already occurred. For example, when missing transaction data were identified during an audit at a financial institution, the bank was subjected to a substantial fine, after which data quality control measures were introduced.

Although reactive systems are relatively simple and understandable, they have limited capacity to prevent problems before they occur. Their influence on social consciousness is primarily restricted to the regulation of external behavior.

2. Pre-emptive Systems: Prediction and Prevention

Pre-emptive, or proactive, governance aims to predict and prevent problems before they arise. These systems use historical data, machine learning algorithms, and



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predictive analytics to identify potential future events and initiate appropriate responses.

Typical examples of pre-emptive systems include credit scoring mechanisms, which assess an individual's likelihood of repaying a loan; predictive policing systems, which identify potential crime hotspots; and recidivism risk assessment tools such as COMPAS.

China's social credit system represents one of the most extensive examples. According to the figures presented in the source material, the system has accumulated more than 80.7 billion credit records and facilitated the allocation of trillions of yuan in loans through financial institutions.

Although pre-emptive systems may contribute to crime reduction and resource optimization, they also raise significant ethical concerns.

From the perspective of modeling social consciousness, pre-emptive systems may pose greater risks than reactive systems.

First, such systems may classify individuals as “dangerous” before they have committed any offense, potentially leading to preventive punishment and stigmatization.

Second, these systems may reproduce and amplify biases embedded in historical data. For example, an analysis of the COMPAS algorithm found that Black defendants who did not subsequently reoffend were incorrectly classified as high risk at approximately twice the rate of white defendants who did not reoffend.

Third, pre-emptive systems may activate a mechanism known as the self-fulfilling prophecy. If an algorithm classifies an individual as “high risk,” surveillance of that person may intensify. Consequently, the individual's interactions with the criminal justice system may increase, potentially reinforcing the algorithm's initial assessment.



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Fourth, many pre-emptive systems exhibit a “black-box” character, meaning that their decision-making mechanisms are difficult to understand or interpret. This lack of transparency can restrict citizens' ability to challenge decisions made about them.

Therefore, before implementing such systems, it is essential to ensure their transparency, accountability, and compliance with civil rights.

Algorithmic governance is becoming an important organizational instrument in contemporary society. Responsible use requires technical efficiency to be balanced with transparency, non-discrimination, accountability, and respect for human rights. Assessing its influence on social consciousness requires attention not only to technology but also to the institutions and information environments in which it operates.

References

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