

Theology and Data: Ethical Implications of Big Data from a Theological Philosophy Perspective

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ABSTRACT

Big Data has become a revolutionary phenomenon, transforming nearly every aspect of human life, from how we communicate to the methods of large-scale data collection, storage, and analysis. While it offers numerous benefits, such as technological advancements and increased efficiency across various sectors, Big Data also poses complex ethical challenges. From the perspective of theological philosophy, these issues raise profound questions about individual privacy, the distribution of authority, and moral responsibility in data usage. This article explores how Big Data interacts with theological principles, particularly in the context of ethics, highlighting critical issues such as privacy violations, inequities in data control, and the implications for human freedom and dignity. Through a critical analysis approach, this research provides insights into how theology can play a role in formulating ethical guidelines to address these challenges in the digital age.

Keywords: Big Data, ethics, theological philosophy, privacy, authority, moral responsibility, freedom, human dignity, digital revolution, data control

1. INTRODUCTION

The development of digital technology has transformed the way humans interact with information and data. Among these changes, the emergence of Big Data is one of the most influential phenomena in modern life. Big Data, which refers to the collection and analysis of vast amounts of data in real-time, has produced significant benefits in the fields of economics, healthcare, communication, and even security. Through advanced algorithms, data obtained from billions of individuals is processed to generate insights that were previously unattainable. However, behind these advantages lie pressing ethical challenges that need to be addressed.

Big Data not only impacts social and economic life but also raises profound questions about privacy rights, authority in data management, and moral responsibility in its usage. The massive collection of information without clear consent from individuals creates ethical dilemmas related to privacy. Furthermore, the dominance of a handful of technology companies in managing and controlling data raises issues of injustice and power imbalances that need to be critically evaluated. From a theological perspective, individual data is more than just numbers it is an expression of human dignity and existence, and must be respected as part of God's creation.

In theological philosophy, morality and human dignity have always been at the center of focus. When Big Data is utilized for commercial, political, or even social purposes, significant questions arise: do humans still have autonomy over their personal information? What is the moral responsibility of companies or governments managing data in upholding human dignity? And does the unequal distribution of power in data ownership and access threaten individual freedom?

This article aims to delve deeper into the ethical implications of Big Data using a theological philosophy approach. By leveraging moral principles and ethical values from theological traditions, this research will explore how Big Data should be understood and used in a manner that is not only legally valid but also ethical and moral. Through this critical analysis, it is hoped that a stronger framework can emerge to address the moral challenges posed by the digital revolution, prioritizing individual rights, justice, and social responsibility.

2. RESEARCH METHOD

This research employs a critical analysis approach to relevant literature in the fields of theology, ethics, and Big Data. The methods used consist of several stages as follows:

- a. Literature Review: An in-depth literature study is conducted to understand the concept of Big Data, data ethics, and its implications for theological and moral values. This review includes classic and

modern theological texts, ethical philosophy, and scientific publications on digital data management.

- b. Ethical-Theological Analysis: The ethical approach is based on theological principles, focusing on issues such as human dignity, freedom, and justice. Each concept of Big Data is analyzed through a theological lens to explore the ethical challenges arising in data management in the digital age.
- c. Case Studies: Several cases related to privacy violations, data misuse, and power distribution in data management will be examined. These cases are chosen to illustrate how theological principles can be applied to resolve ethical dilemmas in the field of Big Data.
- d. Evaluation System: After the analysis is conducted, conclusions will be drawn regarding how theological principles can provide ethical guidance in managing Big Data. This evaluation system aims to create an ethical framework that can be utilized by policymakers, technology companies, and the broader community.

3. RESULTS AND DISCUSSION

This research reveals that although Big Data has the potential to provide remarkable benefits in efficiency, innovation, and data-driven decision-making, the ethical implications of its usage require serious attention, especially from the perspective of theological philosophy. Several key points found in this research are as follows:

- a. Privacy Violations: Data as Self-Expression
Theology views privacy as a fundamental aspect of human dignity. Privacy is not merely a legal right, but part of human rights rooted in the theological belief that each individual is a unique creation of God. Each piece of personal data, in this context, is regarded as a sacred expression of human self. When individual data is collected without clear consent or used for non-transparent purposes, such as commercial gain or political manipulation, it becomes a form of human exploitation. Within the theological framework, such actions violate the principle that every person has the right to control the most personal aspects of themselves. Therefore, data misuse can be understood as a denial of human dignity.
- b. Injustice in Data Control: Digital Discrimination
Big Data in this digital age is dominated by a few large technology companies that have the capacity to access and control information on an unprecedented scale. This inequality poses serious challenges related to social justice. The theological perspective emphasizes the importance of fair power distribution in society. When a handful of entities have exclusive access to vast amounts of data, there is an inherent potential for injustice in the decision-making based on that data, such as discrimination in public services, finance, or healthcare. If not managed fairly, Big Data can exacerbate existing social inequalities, worsening disparities in access to opportunities and resources. In this regard, theology calls us to rethink the power structures that exist in the digital world. Decisions made based on unfairly distributed data can harm marginalized communities, reinforce social exclusion, and undermine social justice, which is a crucial foundation in ethical-theological tradition.
- c. Implications for Freedom and Dignity: Data as Control
One of the greatest ethical concerns regarding the use of Big Data is how it can affect individual freedom. In theology, human dignity is closely linked to freedom—the freedom to choose, determine one's fate, and exercise personal autonomy. Big Data, when used to control or manipulate individual behavior without their awareness, poses a direct threat to this freedom. For example, data analysis used to predict and subtly influence consumer or voter decisions can undermine human autonomy. Moreover, theology sees humans not just as objects of data but as subjects with inherent dignity. When data is used to reduce humans to numbers or statistics that can be manipulated for the benefit of certain parties, it constitutes a violation of their dignity. This perspective demands an ethical framework that protects individuals from non-transparent and exploitative data manipulation.
- d. Moral Responsibility: Ethical Sustainability in Data Management
Moral responsibility in the use of Big Data does not rest solely with the users or data processors, but with the entire ecosystem that facilitates the collection, storage, and utilization of data. Theology teaches the importance of shared responsibility in safeguarding human welfare and dignity. In the

context of Big Data, moral responsibility must encompass practices that are transparent, accountable, and fair. Every entity involved in the data value chain, from technology companies to governments, has a moral obligation to ensure that data usage does not violate human rights or diminish human dignity. Theology promotes the concept of stewardship, which requires every individual or institution to act as a guardian of God's creation, including human dignity in the digital era. This approach compels us to consider how data is used not only for commercial or political interests but also how it can be employed to advance the common good, minimize harm, and uphold justice for all parties.

4. CONCLUSION

This research highlights the ethical challenges posed by Big Data from the perspective of theological philosophy, particularly regarding issues of privacy, justice, freedom, and human dignity. While Big Data offers significant benefits in various fields, this study emphasizes that unethical data management can degrade individual dignity and threaten their freedom. From a theological perspective, personal data is not merely a commercial asset but an expression of human self that must be respected. Three main issues arise in this research: first, privacy violations occur when data is collected without clear consent and used without moral consideration. Second, injustice in the distribution of power related to data control, where large companies dominate access to data, resulting in social inequality. Third, the threat to individual freedom when data is used to manipulate or control behavior without the person's knowledge. In response to these challenges, theology offers relevant moral principles to address the digital age. The concepts of human dignity, social justice, and moral responsibility serve as the foundation for developing a robust ethical framework in Big Data management. Therefore, more equitable and transparent regulations are needed, along with collaboration among stakeholders to ensure that data technology is used for the common good and protects individual rights. Thus, this research affirms the importance of theology in providing ethical guidance rooted in respect for human dignity and challenges data managers to consider their moral responsibilities in safeguarding human well-being in the era of Big Data.

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