Chapter 2
A Pragmatic Regulatory Framework for Artificial Intelligence

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ABSTRACT

The application of AI technology in different sectors can intrude on the data subjects' privacy rights. While the data protection laws attempt to regulate the use and processing of personal data, these laws obstruct the growth and development of AI technology. Current regulations are unable to cope with the AI revolution due to the pacing problem and Collingridge dilemma. In view of the regulatory gaps and the complexity of technology, there is a strong justification to regulate AI technology. It is increasingly important to safeguard privacy without encumbering AI technology with regulatory requirements that will hinder its progress. With the convergence of AI and blockchain technology, privacy challenges are exacerbated. In this chapter, several types of regulations will be analysed to decipher a suitable regulatory framework for AI. This is to ensure effective regulation of AI and to allow AI to flourish with the use and application of blockchain features.

INTRODUCTION

The emergence of AI has had a profound impact on our lives. As AI evolves, it heightens the ability to use personal data in ways that intrude the right to privacy of individuals. Therefore, a comprehensive regulation on AI can protect the right to privacy and promote societal values.(Dignum, 2019; Wischmeyer & Rademacher, 2019) Regulation is an instrument that facilitates the development of economic sectors and it is a prerequisite for the proper functioning of markets that can enable competition and improve consumer welfare.(MacCarthy, 2020) It can provide specific high-tech service sectors with legal certainty and stability.(European Commission, 2020)

AI regulations can be used to achieve goals that are vital for the betterment of the society and to encourage AI technological innovations to flourish because the interaction between innovation and

regulation is mutually inclusive.(Wischmeyer & Rademacher, 2019) Having considered the definition of regulation and reasons to regulate AI technology, it is important to evaluate the challenges faced by legal systems in regulating AI.

Various challenges have arose from the use of AI in different sectors. AI systems use large volumes of data to gather meaningful insights and patterns about data subjects. The usage of large datasets can result in the loss of individual control over the data subjects' personal data and consequently, diminish human dignity, agency and choice. Besides that, opacity in the processing of personal data by AI systems may infringe privacy of data subjects because they are not provided adequate information or explanation of the manner in which their personal data is collected, used or processed. This can lead to data exploitation where users of AI-based systems may not be aware that their information is being repurposed for uses not disclosed at the time the data was collected. AI systems may link disparate information that might result in re-identification or deanonymisation and can intrude the data subjects' right to privacy. Besides that, AI systems can predict and infer sensitive information from the data provided, which significantly heightens privacy intrusion. The application of AI challenges data protection laws that currently exist, including the principle of data minimisation, purpose limitation, transparency, right to erasure, and storage limitation. The convergence of AI with blockchain technology is no doubt beneficial to enhance the function and applicability of AI. Nevertheless, with the deployment of blockchain in the realm of AI, privacy issues are exacerbated. Though the amalgamation of these two technologies is still at its infancy, a regulatory framework for AI should be deployed to address challenges in the realm of privacy especially with the applicability of blockchain features in AI.

The burden imposed by the present data protection regulations may hamper the growth and development of AI in various sectors. Thus, due to the lack of AI regulations, this chapter evaluates various regulatory frameworks that can be adopted to safeguard privacy and promote AI development. This author proposes a suitable regulatory model as AI is "too promising to be governed in a hands-off fashion, waiting for problems to develop and then trying to fix them after the fact".(MacCarthy, 2020) Due to the dynamic nature of AI, regulators, stakeholders and the government have to actively engage in dialogues on the regulation of AI technology to ensure that right to privacy becomes an integral part of the future AI development.

BACKGROUND

Roger Brownsword and Morag Goodwin defines regulation as "encompassing any instrument (legal or non-legal in its character, governmental or non-governmental in its source, direct or indirect in its operation and so on) that is designed to channel group behaviour".(Brownsword & Goodwin, 2012) The application of AI is subject to existing laws, namely consumer rights laws, human rights laws, and data protection laws. However, these laws may be unsuitable to address various concerns and issues that arise, because they are devised around a "socio-technical context" of the distant past.(Clarke, 2019)

In comparison to the fast development of AI technology, the legal frameworks relied on by the society to regulate these emerging technologies have not progressed as rapidly. There are growing concerns as to the mounting gap between the rate of technological advancement and its regulation through legal mechanisms. The existing legal frameworks take a "static" rather than a "dynamic" approach.(Marchant et al., 2011) They are "mired in stagnation, ossification and bureaucratic inertia".(Marchant et al., 2011) Scholars have proposed two options to address the growing gap between the two. Firstly, to slow down

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