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Trouble to the Ongoing Regime: AI and Its Challenges

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This research study is directed towards understanding and discussing the different challenges that are being posed by the new and emerging AI technology to the already existing regulatory and governance structures. It is natural that whenever a new technology evolves and emerges some challenges and difficulties would be faced by the already existing legal structures, and that law would have to evolve to keep up with and regulate the advancing technology as was the case with the 'Digital Data' processing technology, laws were evolved and enacted to keep up and regulate that technology. However, it is pertinent to understand that AI is an extremely complex technology that is pervading into multiple sectors and areas and is rapidly evolving, given its complex nature it is an arduous task to evolve regulatory structures and enact laws to regulate this kind of technology as it has many facets which are posing various challenges to the present legal structures and regulations, this study has attempted to understand the said challenges which are being posed by this technology. Copyright Law is another area that has faced certain dilemmas because of the advent of AI and the same has been touched upon by this study. Finally, this study has also aimed to briefly touch upon the steps the 'European Union' is taking to regulate AI.

Keywords: *AI, technology, copyright law, european union.*

INTRODUCTION

A significant event and a watershed moment in the journey towards the development of a modern world was undisputedly the 'Industrial Revolution'. The 18th Century saw the advent of the phenomenon that came to be known as the 'Industrial Revolution', this said phenomenon

which witnessed the great transition to the extensive use of machines by humans for the production of goods and commodities, occurred roughly between the period from 1760 to 1840.¹ This said revolution had the effect of ushering most parts of the world into an age of science, innovation, and technology. What the world is witnessing now in the present times is perhaps the beginning of another technological revolution with the advent of Artificial Intelligence.

The world is galloping towards the process of digitalization, the old manual ways of conducting transactions, business, and activities are getting digitalized at an astounding pace. The Indian initiative of Digital India which was launched in the year 2015 stands as a prominent example of the same. A new technology that is now contributing greatly towards the ongoing digitalization and transformation is 'Artificial Intelligence' or the 'AI'.

AI has entered into various sectors and areas of our societies, be it: the medical sector, the automobile sector, face recognition technology in phones, enabling social media posts and feeds based on individual personal preferences, Even in search engines AI has a role to play, the ADAS technology which is being offered in cars is based on and powered by Artificial Intelligence, the digital or virtual assistants like Apple's Siri and Amazon's Alexa which people have become so accustomed to are also driven by the said AI technology, there are various other sectors where AI is marking its footprint.

In the past 12 months the world has witnessed significant developments in the field of AI, OpenAI's 'ChatGPT' came into great prominence following the November 2022 launch wherein *ChatGPT was introduced using GPT-3.5*² subsequently, Microsoft introduced the new AI-driven version of its search engine 'Bing' and the 'Edge' browser, Google also in February 2023 announced the arrival of its AI-powered chatbot which they have named 'Bard'. These AI developments from these competing organizations have certainly given the impression of an AI

¹ 'The Industrial Revolution' (*National Geographic*)

<<https://education.nationalgeographic.org/resource/resource-library-industrial-revolution/>> accessed 15 August 2023

² Kristi Hines, 'History of ChatGPT: A Timeline of The Meteoric Rise Of Generative AI Chatbots' (*Search Engine Journal*, 04 June 2023) <<https://www.searchenginejournal.com/history-of-chatgpt-timeline/488370/#close>> accessed 16 August 2023

race of sorts from which an evident conclusion that can be derived is that AI is the next big boom in the world of technology and it is here to stay and greatly affect the already existing practices and regulatory structures.

To understand what challenges a new technology like AI would pose, it is first pertinent to understand the meaning of AI. 'AI' or 'Artificial Intelligence' is essentially '*an interdisciplinary technology that aims to use large data sets (Big Data), suitable computing power, and specific analytical and decision-making procedures to enable computers to accomplish tasks that approximate human abilities and even exceed them in certain respects.*'

AI is a constellation of technologies that enable machines to act with higher levels of intelligence and emulate the human capabilities of sense, comprehend, and act. Thus, computer vision and audio processing can actively perceive the world around them by acquiring and processing images, sound, and speech. Natural language processing and inference engines can enable AI systems to analyze and understand the information collected. An AI system can also take action through technologies such as expert systems and inference engines or undertake actions in the physical world. These human capabilities are augmented by the ability to learn from experience and keep adapting over time. AI systems are finding ever-wider applications to supplement these capabilities across enterprises as they grow in sophistication.³

AI utilizes two prominent techniques or applications known as 'Machine Learning' and 'Deep Learning'. AI is the overarching or the broader technology, the subset of which is Machine Learning and '*a further subset or subfield of Machine Learning is Deep Learning*'.⁴

DIFFICULTY AND CHALLENGES FACED IN REGULATING AI

Advancement in technology and digitalization is a natural corollary of advancement and innovation in science, scientific discoveries and innovations result in pushing the pace of technological advancement, and many times it is the case that the pace at which technology

³ Niti Aayog, *National Strategy for Artificial Intelligence* (2018)

⁴ 'AI vs. Machine Learning vs. Deep Learning vs. Neural Networks: What's the difference?' (IBM, 06 July 2023) <<https://www.ibm.com/blog/ai-vs-machine-learning-vs-deep-learning-vs-neural-networks/>> accessed 18 August 2023

develops and evolves is much faster than that at which the existing legal and regulatory structures evolve, thus, often it is the case that law has to evolve in response to technological advancements to keep up with the said advancements to regulate and govern the same. The technology of digitalization of personal data and information is a prominent example of the said scenario, the technology to digitalize personal data and information evolved first and in response to laws like the European Union's General Data Protection Regulation which came into force in 2018 or the Indian Digital Personal Data Protection Act 2023, were developed and enacted to provide a regulatory mechanism to govern this technology and the corollaries flowing from it.

However, framing governance mechanisms and regulating advanced technologies is a challenging task and therefore, it takes time to set up and enact such mechanisms and regulations as there are many hurdles and difficulties which need to be overcome when formulating and framing governance models and regulations for complex and advanced technologies.

Regulating AI also has its challenges and difficulties, some of these are:

The challenge about Ethics: AI systems can be biased or discriminatory; they can produce results or output that may be biased or discriminatory. *Search-engine technology is not neutral as it processes big data and prioritizes results with the most clicks relying both on user preferences and location. Thus, a search engine can become an echo chamber that upholds biases of the real world and further entrenches these prejudices and stereotypes online.*⁵ Further, the 'Black Box' element in several AI models also adds to the problem of ethical compliance, For instance - In an event wherein an AI or Deep Learning tool gives out a biased or discriminatory response or output, the Black Box problem renders us unable to understand as to why the AI is giving a biased or discriminatory response, that is to say, that this issue doesn't allow us to gauge and understand the logic or reasoning behind an AI's biased or discriminatory response. Therefore, it becomes difficult to

⁵ 'Artificial Intelligence: examples of ethical dilemmas' (UNESCO, 21 April 2023)
<<https://www.unesco.org/en/artificial-intelligence/recommendation-ethics/cases>> accessed 20 August 2023

make regulations to curb this behavior of AI when we are unable to understand the cause behind it.

The complex nature of the technology and the rapid pace at which it is developing: AI is an extremely complex technology but one which is evolving and developing at a relentless and astounding pace having its effect, and leaving its footprint across several different fields, sectors and society, from medical to automobiles, various sectors are now witnessing the infusion of AI technology, this also creates an impact upon the functioning of the society. The difficulty that this given scenario creates for the application of law and regulations is that the evolution and development process of law associated with this technology is being far outpaced by the rapid and relentless advancement in this said technology, given the complex nature of this technology, the issue which it creates for formulation and application of law and regulations is one of 'Uncertainty', that is to say, given the complex nature of the creature and its rapid advancement, uncertainty looms large over the development and application of law about AI technology. Since this technology is advancing exponentially, there is a difficulty in having complete knowledge about it and its working as it is constantly evolving, the black box issue of AI is an example of this, therefore, what this leads to is difficulty in the application of law and regulations to this technology, *'because of lack of knowledge and, often, unpredictability, there is a risk that legal measures may be ineffective or have dysfunctional consequences.'*

Challenge due to the nature of the technology to transcend borders: AI is another new technology that goes beyond borders, that is to say, this technology is not restricted by national borders. AI is also susceptible to misuse, and that coupled with its global or transnational dimension poses a regulatory challenge. For instance, a person sitting in one part of the world can misuse this technology to create 'Deepfake' images of another person in another country or part of the world and in this particular scenario the perpetrator is beyond the legal jurisdiction of the victim's country, this showcases the limitations of national laws in such cases. Thus, to address the AI governance and regulatory challenges in such cases, it is essential to have a truly global and binding International law on AI. At present, there is no global binding regulatory treaty or law on AI, however, steps are being taken on the International level to establish a

uniform AI regulatory framework, the UNESCO Agreement on Ethics of AI is like recommendations called the 'Recommendation on the Ethics of Artificial Intelligence' and the EU's 'Convention on AI' which is still in works are some of the steps which are being taken to establish a global governance framework for AI.

The Challenge posed by the diverse nature of AI technology: AI is a technology that is not confined to one sector or area or one kind of work, its application is all across the board when it comes to the kind of work or sectors it can be applied to. The application of AI in different areas is only increasing since the nature of this technology is such that it can have varied applications. This dimension of this technology poses a regulatory difficulty since *'AI has a multi-faceted capability, the 'one-size-fits-all' regulation will over-regulate in some instances and under-regulate in others. The use of AI in a video game, for instance, has a different effect and should be treated differently from AI that could threaten the security of critical infrastructure or endanger human beings.'*⁶

CHALLENGES POSED BY AI TO COPYRIGHT LAW

The advent of AI has posed certain dilemmas to the Copyright Law and the same shall be briefly looked upon in this study:

- Copyright is essentially a bundle of rights given to the creator or author of original, literary, dramatic, musical and artistic works and even for computer programs.
- Copyright bestows upon the author a set of rights which include 'Economic Rights' and 'Moral Rights'.
- These said economic rights essentially include rights like - the right to reproduce the work, publish the work, create translation and adaptations, perform the work, sell the work or give it on rent among other rights.

The Indian Copyright Act under its S.17 mandates that the 'Author' of a work is the first copyright owner in that particular work. An author of a work is generally a person who translates an idea into a tangible expression work or form. Further, *Under Indian Law, only a*

⁶ Tom Wheeler, 'The three challenges of AI regulation' (*Brookings*, 15 June 2023)

<<https://www.brookings.edu/articles/the-three-challenges-of-ai-regulation/>>accessed 22 August 2023

*natural person may be considered as the author of a copyrightable work.*⁷ Now the difficulty or dilemma that the advent of AI particularly ‘Generative AI’ has posed to the Copyright Law pertains to determining authorship or ownership in works that are created by AI.

The dilemma that has come up in light of the advancement in AI technology is that in an AI-created or generated work who is to be the owner of the copyright, would it be the AI itself? Or the user? Or the manufacturer? Or the developer of the AI system Or the creators of the original work from which the AI draws reference.

S.2 (d)(vi) of the Indian Copyright legislation provides that when it comes to computer-generated ‘musical, literary, artistic and dramatic work’, the author of the work would be ‘the person who causes the work to be created’ and thus the author would be the owner of the copyright. However, the dilemma still exists in the case of AI-generated work, as generative AI can itself create an output or work with minimum input by the user by way of machine learning or deep learning. Therefore, there are many dilemmas that the advent of AI has posed before the Copyright Law, and the answers to which remain unclear.

THE EU’S AI ACT: A POSSIBLE ROADMAP FOR AI REGULATION

The European Union has been very prompt when it comes to regulating Advanced and Complex technologies. Its GDPR, to govern the process and activities related to data processing, was certainly a praiseworthy step, and the said regulation can act as a reference point for many countries who aspire to enact their own data protection laws. The recently passed Indian legislation on Data Protection also reflects certain elements and aspects of the said EU law.

The EU has now taken another important step towards regulating another complex technology which is the AI. The EU’s AI Act which is still in the works and the form of draft legislation aims to provide a comprehensive AI governance mechanism.

⁷ Jai Vignesh K, ‘AI Generated Artworks & Copyright’ (*Surana & Surana*, 04 July) <<https://suranaandsurana.com/2023/07/04/ai-generated-artworks-copyright/>> accessed 24 August 2023

Some of the prominent features of this proposed legislation include –

- A fundamental feature of this legislation is that it proposes to categorize different AI systems based on the Risk levels that they possess.⁸
- There is more scrutiny for those AI systems that carry a higher risk as compared to those that bear comparatively lower risk levels.⁹
- Those AI systems that fall under the Unacceptable Risk category would be banned, however, certain exceptions are permitted.¹⁰
- AI systems that pose a threat to Fundamental Rights or Safety would be deemed as High Risk and would be placed into two separate categories depending on their nature and utility. These high-risk systems would be subjected to scrutiny and assessment not only before they are launched but also throughout their life.¹¹
- Stringent conditions about transparency have also been imposed upon Generative AI.¹²
- Limited Risk AI systems would also be subjected to transparency-related compliances.¹³

CONCLUSION

AI certainly is a technology that is still developing however; it is already affecting our lives in many respects and many sectors. The AI revolution has the potential to have the impact that the Industrial Revolution had in terms of ushering people into a world of greater technological advancements. This is a technology which if used in the right way can greatly help in improving the lives of the people be it in the Medical sector, the Agriculture sector, or any other sector. However, it is pertinent to understand that such technologies are also susceptible to misuse, and to prevent that effective regulatory and governance mechanisms are required but developing such regulatory mechanisms and frameworks to govern and regulate such complex technologies

⁸ 'EU AI Act: first regulation on artificial intelligence' (*European Parliament*, 08 June 2023) <<https://www.europarl.europa.eu/news/en/headlines/society/20230601STO93804/eu-ai-act-first-regulation-on-artificial-intelligence>> accessed 26 August 2023

⁹ *Ibid*

¹⁰ *Ibid*

¹¹ *Ibid*

¹² *Ibid*

¹³ *Ibid*

which are evolving at a rapid pace is not a simple task and is subject to various obstacles as this research study has discussed. AI is a technology that is extremely complex and is advancing relentlessly and the existing legal structures and frameworks are not appropriately equipped to govern and regulate it, A natural corollary to this is that this said technology is posing various questions and dilemmas to the present legal structures and frameworks, however, steps are being taken to evolve and upgrade the present legal structures and regulatory frameworks to make them appropriately equipped to regulate the AI technology.