



Contemporary Legal Issues and Challenges of Innovations under Artificial Intelligence: An Expository Evaluation

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Abstract

This paper examines the emerging issues that arise with the innovations in artificial intelligence (AI). AI has been given several meanings and definitions; however, with its habit of adapting to a growing society, these meanings become outdated as the day goes by. Artificial Intelligence has been considered to be the science of making machines think like humans. As time progresses, the merits of this AI have gradually affected several fields, including marketing, finance, healthcare, education, transportation, electronics, etc., and it cannot be denied that these influences are beneficial to several calibres of people, but then, the consequences that follow from the negative runs beyond the reach of its users.

AI works by using algorithms and data to help machines perform such activities that would have required the use of human intelligence. This means that it promotes the chances of relaxation to people as it is accompanied by stress-free task-performing abilities. More so, with its ability to make decisions, human troubles become less as it can be consulted at any time for taking steps in any given task. However, some emerging issues come along with Artificial Intelligence, such as human rights concerns. These range from the question of the age factor of AI, the infringement on the human right to freedom of speech, and the right to equality, among others. Moreover, the functioning of Artificial Intelligence has encroached on the right to privacy of many individuals.

The author provides an overview of the functionality of artificial intelligence and its impact on human rights. Careful consideration has been given to draw the line between artificial intelligence and the internet. The importance of artificial intelligence has also been discussed in detail, along with the possible impacts that

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it can pose to the legal system and the environment in general. It is concluded that a balanced approach can be taken to explore the benefits of artificial intelligence and, at the same time, mitigate its adverse consequences through law, sensitisation, and setting standard eligibility criteria.

Keywords

artificial intelligence, human rights, technology, law, and environment

INTRODUCTION

The advancement of Artificial Intelligence (AI) in the 21st Century is faster than one could have imagined before today. It has grown on a large scale such that the need for AI has become a necessity in everyday life around the globe. Besides, it has regulated and influenced all phases of life, so the reliability of people on AI can no longer be questioned.

Average citizens of the nation comprehend the need to use AI. It has gone beyond being in a monotonous position now to become available in

every circumstance. On the internet, social media platforms and even in private chats between two individuals which are end-to-end encrypted, it still finds its way to adjust in the accessible space.

AI has been given several meanings and definitions; however, with its changing habit of adapting to the growing society, these meanings become outdated as the day goes by. Artificial Intelligence has been considered to be the science of making machines think like humans. As time progresses, the merits of this AI have gradually affected several fields, including marketing, finance, healthcare, education, transportation, electronics, etc., and it cannot be denied that these influences are beneficial to several calibres of people, but then, the consequences that follow on the negative runs beyond the reach of its users.

Putting all these factors together, the legal sector, which always emerges in a dynamic society, seems to be in awe of



the nature of signals, speed, and results it receives from the AI. To this effect, it becomes foreseeable that the laws become hand-folded without proper or suitable enactments, rules or regulations to adapt to societal changes.

Looking at the present situation, this work focuses on expounding the meaning, nature, benefits, and legal issues and challenges that are faced with the evolutionary innovations that are prevalent as a result of Artificial Intelligence. While doing so, attempts will be made to distinguish between artificial intelligence and the internet, along with the ways to balance the system at the end, with a conclusion.

Meaning of Artificial Intelligence

According to the International Organization for Standardization (ISO), Artificial Intelligence is “*a technical and scientific field devoted to the engineered system that generates outputs such as contents, forecasts, recommendations, or*

decisions for a given set of human-defined objectives”.²

AI technologies include machine learning (ML), Deep learning (DL), natural language processing (NLP), Robotics and Computer vision. It has several features and falls within diverse categories, which include Chatbot, OpenAI, navigation apps, email spam filters, recommendation engines, autocorrect features, etc. and can adjust to different learning processes such as supervised, unsupervised and reinforcement learning.³

In 1955, an American computer scientist, John McCarthy, coined the term ‘Artificial Intelligence’ and defined it as “*the science and engineering of making intelligent machines*”. According to an AI pioneer, Marvin Minsky, Artificial Intelligence is “*the science of making*

² International Organization for Standardization, *Information Technology – Artificial Intelligence – Artificial Intelligence Concepts and Terminology*, ISO/IEC (22989:2022).

³ Ibid.



machines do things that would require intelligence if done by men". While the relevance of these definitions remains, the innovations of AI make room for more divergent meanings. It is a technology-driven mechanism which allows computers and machines to integrate or simulate human learning, problem-solving, and creative ideas to produce expected results. It can be predicted based on the commands, prompts, and algorithms upon which information is fed into it.

Artificial intelligence can be classified based on its functions, like reactive machines, limited memory, theory of mind, and self-aware. It can also be categorised based on its capabilities, such as Artificial Narrow Intelligence, Artificial General Intelligence, and Artificial Super Intelligence.⁴

⁴ Sajja, Priti Srinivas. "Introduction to artificial intelligence." In *Illustrated Computational Intelligence: Examples and Applications*, pp. 1-25. Singapore: Springer Singapore, 2020.

Differences Between Artificial Intelligence and the Internet

Artificial Intelligence has certain features that often compel people to become confused as to whether it is the same thing as the internet. It is pertinent to mention here that the internet is a global network of interconnected computers and servers, which not only helps to foster communication but also goes on to the transfer of data and sharing of information.⁵ It has been of great importance in the sense of providing online access to several platforms, applications and creating the avenue for some services with the help of human support, interaction and intelligence.

Artificial Intelligence, on its part, attempts to ignore the essentiality of human intelligence by simulating it in machines. It carries out the work that would have been performed by human

⁵ Chiradeep Basu Mallick, *What is Internet? Meaning, Working, and Types*, SPICEWORKS (2023), <https://www.spiceworks.com/tech/networking/articles/what-is-ethernet/>.



intervention through⁶ machine learning, problem-solving capacities and natural language processing. This means that it can independently optimise itself in such a way that there can be results, decision-making, predictions and automation without any human interaction. It is not concerned with interconnecting people; rather, it focuses on performing tasks and making decisions without transferring data as done by the internet.

Nonetheless, it cannot be denied that both the internet and artificial intelligence can handle a huge amount of data, speed up procedures, and ease human life. They have attained global heights with their wide scope and accessibility of data, yet their negative impact on human lives is tantamount almost parallel.

⁶ B. J. Copeland, *Artificial Intelligence*, Britannica (2024), <https://www.britannica.com/technology/artificial-intelligence>.

ARTIFICIAL INTELLIGENCE and its IMPACT on HUMAN RIGHTS

The transformation of business, individuals, and governance from the traditional way of life to the digital world has been commendable. This progress has been met with several advancements and upgrades, one of which is the emergence of Artificial Intelligence (AI). AI is created in a compatible manner, which has promoted efficiency, innovation and enhanced decision-making in the best possible manner. Even so, some risks emerge regarding data collection and breaches, content moderation and censorship, surveillance, profiling, etc.

The issue that accompanies Artificial Intelligence is the human rights concern. With the advent of Artificial Intelligence, the question of the age factor of AI, the infringement on the human right to freedom of speech and the right to equality, among others, are being put forward as will be subsequently



expounded. Moreover, the functioning of Artificial Intelligence has encroached on the right to privacy of many individuals. The Supreme Court of India in *Justice K. S. Puttaswamy v. Union of India*⁷ took a proactive measure to protect the right to privacy of the Indian citizens by holding that it was an intrinsic part of the fundamental right to life and personal liberty under the Constitution of India, 1950. Such rights, when violated, are justiciable; nonetheless, the lack of a proper legal framework for the recognition of Artificial Intelligence as a legal personality has exacerbated the tension on transparency, accountability, and the liability for violating human rights to privacy in India. This brings about the need to focus on integrating Artificial Intelligence model learning with the requisite training, skills, and legal understanding of human rights as an alternative to privacy concerns.

⁷ Justice K. S. Puttaswamy v. Union of India (2017) 10 SCC 1.

BENEFITS of ARTIFICIAL INTELLIGENCE

Artificial Intelligence has several benefits; its adaptability to people, its durability, breakdown of complexity within seconds, and the ability to learn and improve every day form part of the recognition of its advantages. It follows a set of instructions called algorithms, which help in collecting data, processing the data in a structured manner and applying the same in a given task, out of which it receives feedback for its improvements.⁸

This AI works by using algorithms and data to help machines perform such activities that would have required the use of human intelligence. This means that it promotes the chances of relaxation to people as it is accompanied by stress-free task-performing abilities. More so, with its ability to make

⁸ Harshit Baluja, *The Complete Guide to AI Algorithm*, HUBSPOT BLOG (2024), <https://blog.hubspot.com/marketing/author/harshit-baluja>.



decisions, human troubles become less as it can be consulted at any time for taking steps in any given task.

Another benefit of this AI is its problem-solving capacity. It can solve multiple and complex problems with the help of logic and reasoning. Sometimes, it requires additional effort for one to identify the differences between the work that has been done by humans and that of the machine, as their differences can be very thin, blurred or unfounded, especially without the help of advanced checking tools.

Furthermore, the use of AI is simple to learn, time-effective and less expensive. People of any class can be able to use artificial intelligence as it can assist people from all spheres of life. Sometimes, it performs tasks that would have required certain professionals or experts' consultation. Meanwhile, it also works with precision in terms of the continuous efforts to ensure that it provides the best, most accurate and

required result.⁹ Moreover, it is less expensive in the sense that there are fewer requirements for maintenance. The benefit of AI can be availed through mobile devices; it does not require maintenance fees, holidays, or leave, and also, it does not fall sick like humans.

In terms of the environment, the fundamentals of AI centres around several channels which go beyond contributing to waste reduction and decarbonisation, it can be applied in many different measures, some of which include the detection and prevention of pollution that may arise from toxic emissions, oil spills; observation of environmental constraints in terms of water and air quality, wildlife population, and understanding the nature or level of deforestation. Steps such as AI-powered sensors that are used to observe the quality of air and water, Satellite imaging for monitoring the environment, machine learning for comprehending

⁹ Nikita Duggal, *Advantages and Disadvantages of Artificial Intelligence [AI]*, Simplilearn (2024).



adaptations within wildlife, tracking illegal logging in forests, simulating weather effects and natural disasters to find vulnerability in disaster planning and AI-driven decision support systems can serve as good measures in securing environmental management with the use of artificial intelligence.¹⁰

In addition, environmental AI can be applied to accentuate and curtail the effect of climate change; monitor, promote, and enforce compliance with environmental laws; optimize resource usage to tackle the issue of waste, and foster eco-tourism together with sustainable development. Although it is argued that environmental AI can provide consequences like unemployment, producing carbon dioxide during the training of some popular large AI models,¹¹ ethical

concerns like surveillance and privacy, algorithmic bias, and availability of quality data, among others, these measures can also contribute positively to augmenting resource allocation, and heighten informed decision-making, data accuracy and predictive capabilities without resorting to excessive spending, wastage of time, and inefficiency.

CHALLENGES and IMPACTS of ARTIFICIAL INTELLIGENCE on the LEGAL SYSTEM

- **Unreliable Source**

Artificial intelligence is used in many situations, when it comes to its practical impact, ranging from the translation of judgments in the Court of law, legal research, etc., its importance cannot be underrated. Furthermore, Artificial Intelligence plays a crucial role in legal research when it comes to accuracy; however, it detaches people from the in-depth knowledge that they would have derived if the required research work

¹⁰ Renee Cho, Artificial Intelligence – A Game Changer for Climate Change and the Environment, *Columbus Climate School* (2018).

¹¹ Alokya Kanungo, The Green Dilemma: Can AI Fulfill its Potential Without Harming the Environment? *Earth.Org* (2023).

were studied in detail. Recently, AI has upgraded itself to provide a source of legal data that it brings to its users; however, by taking a close look at the cited reference, it can be noticed that several differences come. For example, there are situations in which it can generate the wrong facts, issues or information, like news¹² and incorrect judgment of the Court of law and when such an error has been committed, it can even lead to gross miscarriage of justice when not verified on time.

- **Lack of Accountability**

The common law maxim has always been that says “*ubi jus ibi remedium*”, which means “*when there is a right, there is a remedy*”, however, in the aspect of artificial intelligence, even though there may be a violation of

rights, the problem may rest on the question of who will bear the liability. Simply put, artificial intelligence has contributed to a large scale of violations, including the right to equality, the right to privacy, infringement of intellectual property rights, unfair trade practices, etc. These violations, if done by a human being, can be attributable to specific provisions of law, and the result becomes either compensation in the form of damages or even an award of punishment depending on the severity and circumstance. When it comes to the aspect of AI, it is not clear as to whom the burden should be thrown on, or who should be held liable for violating these laws, among others, which covers both legal accountability and in terms of ethical problems as well.

- **Independence of Opinions**

Artificial Intelligence does not have

¹² McKenzie Sadeghi, Lorenzo Arvanitis, and others, Tracking AI-enabled Misinformation: 976 ‘Unreliable AI-Generated News’ Websites (and Counting), Plus the Top False Narratives Generated by Artificial Intelligence Tools, NEWSGUARD (2024).

any independent opinion of its own; it collects data from available sources to perform its task or provide results, as the case may be. This information cannot be relied upon in a true sense, as they are not legally or scientifically authenticated in every phase. To become more concerned, artificial intelligence goes as far as collecting information from unlabelled data to form its opinion. These include such data that do not have predefined categories, annotations or classifications; they lack tags, labels or anything to suggest their validity, such as texts that do not have sentiment labels, audio data without speech recognition labels, and images without object detection labels, among others.¹³ This brings a very big challenge to the lacuna of law for their sensor reading,

unsupervised extraction of data, even on social media posts, weblogs, etc.

- **Consultation of Experts**

The innovations of Artificial Intelligence have reduced the need for people to consult approved specialists in certain fields that are required. Besides, some of the experts themselves have relaxed in making further findings and rather rely on the information obtained from artificial intelligence. Possible consequences of this can be issues of medical negligence, manufacture of adulterated food if it is used to mix recipes without evaluation, rejection of cases in courts, and also consequences of actions which are motivated by its opinions without any proper verification of the same. A key factor in this instance falls within the aspect of the autonomy of individuals to choose whether to opt for expert opinion or work with AI;

¹³ Abid Ali Awan, *What is Unlabeled Data?* DATA CAMP (2023), <https://www.datacamp.com/blog/what-is-unlabeled-data>.

this creates chaos, including in cases of healthcare treatment, whether a doctor should rely solely on the AI report or act in a different way.

- ***Effect on Constitutional Objectives***

The Constitution of India promotes certain goals and objectives for its citizens, one among these is socio-economic justice in the form of the Directive Principles of State Policy (DPSP).¹⁴ The aim of this has been built on the foundation of poverty eradication, provision of a welfare state, and providing employment opportunities, among others. However, it can be seen that the emerging features of artificial intelligence and its ability to substitute the necessity of human beings have heavily impacted this goal. Rather than the state providing more employment opportunities, people tend to lose their jobs by the day; hence, in such a situation, the

citizens may be forced to feel left out or thrown into poverty, which is contrary to the object of the Constitution of India.

- ***Unfair Competition***

Apart from people losing their employment due to the replacement of artificial intelligence, it is important to mention that the use of this kind of technology has wiped out several small businesses from gaining a chance in the market. A simple illustration will be a case in which a company brings down its service price due to the ability to deliver several tasks within a short period; as a consequence, the smaller business entities that could not stand a chance to compete will be in two situations. First is that they can lose their customers if their prices are high, or they will reduce their average price and suffer losses, which in either case will not enable their sustenance in the market. Far

¹⁴ The Constitution of India, 1950, Pt. IV



from the constitutional argument, this also brings about unfair trade practices, which can affect the temper of such laws as the Competition Act of 2002¹⁵, among others.

- ***Impact on the Right to Equality***

Artificial Intelligence violates Article 14 of the Constitution of India which provides for equality and resents every form of discrimination. Artificial intelligence is coined with pre-existing biases. Due to its inability to create real information of its own, it can build on discriminatory algorithms that are biased and sometimes against public policy. The principles of equality cannot be applied fairly against such non-living things, as they cannot possibly understand the contextual society of Indian people and create its cycle from such a perspective. Consequently, it becomes prone to

circulating fast, biased, unfair and unconstitutional information that can create the mindset of differences among people.

- ***Effect on Educational Right***

The Right to Education as a fundamental right may be hampered to some extent, as the use of Artificial Intelligence may end up producing such a group of people who cannot survive beyond its scope. For instance, a parent whose child is smart enough to handle the AI system at an early stage may not be able to see the need to pursue real-time education and hard work, thereby denying the child the basics of education. Besides, the replacement of the learning habits that are required to be done by humans have been gradually changed to teachings by machines, as a result, children begin to learn the other way round, and their educational system becomes

¹⁵ The Competition Act, 2002 (Act 12 of 2003), s. 3 (India).



shattered, prone to learning basic information through non-living things and consequently, the rights of those who are not comfortable with adjusting to such system could be traded upon.

- **AI and Article 19**

The Right to privacy has been held to be a fundamental right of citizens under Article 19 of the Indian Constitution, yet the AI transgresses or stretches beyond its limit to ensure that it reaches such data that it is not legally entitled to. Such an act becomes a big threat to the right that has been constitutionally guaranteed to the people of India. Leakages of this information also amount to a great security threat; it can intrude into such information and data that are solely private and available to a limited group of people. In terms of military information, the unrestricted use of artificial intelligence can influence

the national security of a nation¹⁶; strategic studies, plans and other forms of confidential information can be accessed within minutes with a simple command in the artificial world.

- **AI and Privacy**

Issues such as trespass require physical entry into a land. When there is an encroachment into one's privacy which is not being done by a party who is seen, felt, or touched, then it becomes difficult to get a legal remedy. This kind of situation is furthered by the lack of accountability, as mentioned earlier, the law has not adjusted to address several issues that evolve every day from the use of artificial intelligence, and this silence provides a space for several acts which may be termed as unethical, immoral and not proper

¹⁶ Christopher S. Chivvis and Jennifer Kavanagh, How AI May Affect Decision Making in a National Security Crisis, *Carnegie Endowment For International Peace* (2024).



until there is a law to declare it illegal.

- **Artificial Intelligence and its Impact on the Judgments**

Artificial Intelligence has a huge impact that may influence the outcome of a judgment, if applied. First, it lacks the judicial mind, which means it cannot possibly apply the principles of justice, equity, and good conscience, a common law principle that has been upheld by judges from time immemorial.¹⁷ Every case stands on its own legs, irrespective of binding precedents; even so, if artificial intelligence is allowed to assist during the process of a trial, then it becomes impossible to look at a manner based on its context, situation and the personality of those who are involved. In addition, if one may view from the aspect of the quantum of punishment, even artificial

intelligence cannot possibly exercise that discretion with accuracy, factors such as the demeanour of a person, the age, and the possibility of reforming a criminal are things that will create a huge problem if allowed in the custody of an artificial world.

- **Limiting the Scope of Legal Research**

Artificial Intelligence has limited the scope of legal research; people rely so much on it in such a manner that they cannot bother to find details of what is required. These amount to identifying the wrong legal issues, applying certain laws wrongly, as well as reducing understanding of the law. The impact of this has gone very far; people no longer find the need for physical visitation of places to see things with their eyes. This has led to loopholes even in drafting and pleadings, as the information is based on general and not specific fact-finding data. The consequences of this can be inefficiency, loss of

¹⁷ Garima Rajput, Justice, Equity and Good Conscience, *The Amikus Qriae* (2023).



cases, clients, etc. and even a lack of improvement to the dynamic legal market.

- ***The Question of Intellectual Property Ownership***

Intellectual Property law is known for its uniqueness. Currently, it has a national and transnational level of recognition, as every innovation, production, or process requires its protection. Intellectual properties have largely been granted rights based on things that are man-made; these include trademarks, designs, patents, copyrights, geographical indications, trade secrets, etc., thus, the issue with AI now comes in two-fold, which will be looked into vividly. In the first instance, it can be said that there is a question of who should be granted intellectual property. The ideas that are provided by the AI, no doubt, are clustered from already existing information; however, it has been programmed in

such a way that creative ideas can be made out based on the command or question that has been posed to it. Patent law for example does not have so much regard for such things that are automated, that is, multiplying without human intervention, even so, with the innovation that exists with the use of artificial intelligence, it can be noticed that there are high chances that it may start providing products or process of its own and therefore, the provision of patents rights being granted only to human beings may likely stand a chance of amendment or modifications. The owner of the work that it generates is largely unknown, and it becomes questionable whether it can be said to be an anonymous work or thereabouts in the case of copyright protection or infringement.

On the contrary, the use of artificial intelligence has been seen to be one

channel of intellectual property infringement.¹⁸ It does not require a licence, assignment or proper permission based on the authority of law to be able to access information that is not at the disposal of the general public. Notably, designs, trade secrets, copyrights, and process patents are examples of these infringements that take place every day; the information that is preserved by the original owners of the intellectual properties loses its value due to the unauthorised interoperability, intrusion, and access of the artificial intelligence into such information.

THE WAY AHEAD : NEED for a BALANCED SOCIETY

The present position of artificial intelligence is something that cannot be easily reversed in a hurry. To save the

people from an uncontrollable situation, three things are required:

- *Law*: There is an urgent need for sound rules, regulations, guidelines and laws that should regulate the extent, scope and level of application of artificial intelligence based on the issues that have been outlined above.
- *Sensitization*: The people should be properly trained about the advantages and disadvantages, along with the limits of using artificial intelligence. If this is done, it will help to address the level of dependency on the part of the young generation, thereby promoting more research, development and human-empowered innovations.
- *Eligibility*: There should be a balance of interest between allowing the use of artificial intelligence for certain kinds of

¹⁸ Gil Appel, Juliana Neelbauer, and David A. Schweidel, Generative AI Has an Intellectual Property Problem, *Harvard Business Review* (2023).



activities and allowing human efforts to remain irreplaceable in some fields, and also setting the age limit on almost every platform to ensure the training of well-informed and educated citizens.

CONCLUSION

Artificial Intelligence is a booming innovation that is used in most industries and for the execution of daily tasks by various individuals. Upon a careful examination of its nature, it has been seen that it has a clear difference from the internet. AI is accompanied by several benefits, which have been its centre of attraction and have increased the possibility of people following suit to ensure they utilise its functions.

Without regrets, it has also been found that fast-growing artificial intelligence also comes with certain disadvantages; however, they have been found to go deeply into issues and challenges which the legal system has become a victim of.

To address the same, the need for a balanced society has been strongly recommended. This implies that there should be a proper regulatory framework, inculcating knowledge of its use to the people through proper mobilization, as well as creating the limits of its applicability to avert unforeseen future consequences that may not be reversible.