

INTERNATIONAL JOURNAL OF LAW
MANAGEMENT & HUMANITIES

[ISSN 2581-5369]

Volume 4 | Issue 5

2021

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Artificial Intelligence and Copyright: An Analysis of Authorship and Works Created by A.I.

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ABSTRACT

With the current rate at which technology is evolving, enforcing regulations has proven to be a difficult task. Artificial intelligence, which is a major aspect of the Fourth Industrial Revolution, plays a significant role in it. The author of this paper has specifically addressed the issues raised by artificial intelligence (AI) in the context of intellectual property specifically copyright. The authorship of works created by artificial intelligence with human intervention can be attributed to the person who provides the creative input for the work in question. But what about the works of art created entirely by artificial intelligence with no human intervention? The issues of whether such works are protected and who should be considered as the author are tried to address in this paper through a comparative study on Japan, China and U.K with that of India.

Keywords: - Copyright, Artificial Intelligence, and Autonomous AI.

I. INTRODUCTION

In *Naruto v. Slater*, 2016 (monkey selfie case),² the court held that Intellectual property is a human creation, so when there is a human endeavor or intervention that leads to the creation of intellectual creation someone other than human, the law doesn't recognize that.

The present situation has changed a lot and, the Fourth industrial revolution, which we know now is changing the world, artificial intelligence has a vital role in it. To understand what A.I. is, to understand the meaning of intelligence is essential. The term 'intelligence' can be divided into two categories. First type of intelligence is encompassing the level of human capabilities and intelligence. This type is known as "strong artificial intelligence."³ There the processing of a computer is identical to actual human thinking. The other kind of intelligence is known as "weak artificial intelligence", where the computer imitates intelligence based

¹ Author is a LLM Student at Tamil Nadu National Law University, India.

² See *Naruto v Slater* 888 F.3d 418 (9th Cir. 2018).

³ STUART J. RUSSELL & PETER NORVIG, *ARTIFICIAL INTELLIGENCE: A MODERN APPROACH* (1995).

on external manifestation by the pre-programed database.⁴ The outcomes of any input given to weak A.I. are specific and predetermined, unlike strong A.I. So, now we have machines which can think like a human and do human tasks.

With the current speed with which technology is strengthening itself, regulation has proved to be a tough job. For works created by artificial intelligence with human interference, we can attribute authorship to the person who provides creative Input. But, what about the works created by A.I. with no human interference. For example, "*The Day a computer writes a novel*," an AI-written novel developed in 2016, almost won a National literary prize.⁵ Deep Mind, an artificial intelligence company owned by amazon has created a software that can generate music.⁶ So, the time is not far away. The study has been geared to deal with the issue related to authorship for works created by artificial intelligence. To see if we have enough provisions in our legal system to deal with it by a comparative study on China, Japan and the United Kingdom and look onto their various requirements and see whether we can incorporate the same.

We live in a world where humans are not the only ones that have rights. In the eyes of the law, artificial entities have a legal personality too. Currently, the rights are restricted to natural persons and legal entities. So, whether we should consider A.I. also as a separate legal entity. For A.I. to hold IPR, they should have rights and liabilities. In this viewpoint we have to consider the example of Sophia, a robot who was awarded citizenship in the year 2017 by Saudi Arabia.⁷ It is said that she enjoyed more rights than those enjoyed by the women in that country. So, there are chances that more such circumstances arise. Like amazon has a personhood, is it possible that amazon's Alexa might also qualify for a new status in law.⁸

Through this research paper, answers to all the above questions raised will be dealt with. Through a comparative study, the legal provisions of different countries chosen regarding A.I. will be analysed. Their stand on whether they should give A.I. authorship with recent cases and see whether the current laws are sufficient to deal with it both in India and the

⁴whatcomputersstillcando_acritiqueofartificialreason.pdf, https://terrorgum.com/tfox/books/whatcomputersstillcando_acritiqueofartificialreason.pdf (last visited Oct 16, 2021).

⁵ DNA Web Team, *This Japanese AI wrote a novel and almost won a literary prize*, DNA INDIA (2016), <https://www.dnaindia.com/technology/report-this-japanese-ai-wrote-a-novel-and-almost-won-a-literary-prize-2193918> (last visited Oct 14, 2021).

⁶ DeepMind - What if solving one problem could unlock solutions to thousands more?, DEEPMIND, <https://deepmind.com/> (last visited Oct 16, 2021).

⁷ Jesus Retto, *SOPHIA, FIRST CITIZEN ROBOT OF THE WORLD* (2017).

⁸ Amazon Alexa Voice AI | Alexa Developer Official Site, <https://developer.amazon.com/en-US/alexa> (last visited Sep 26, 2021).

chosen countries.

II. WORKS CREATED BY AI, WITH HUMAN INTERVENTION

The works to be protected as Copyright, there are two essentials which should be considered. First, the idea should be expressed in some form. It should originate from the Author, i.e., for the Copyright there is no need for novelty. Instead, the concept of originality, in some statute's "creativity" is also needed for the works. When a work is created with artificial intelligence, the main issue in the area is whether that work can be considered for copyright protection.

For analyzing Copyright protection for the works created by A.I. with Human Intervention, the Author does a comparative study focusing on some current statues - Japan, China and The United Kingdom.

(A) Japan

According to Art 2, para 1, item (i), defines "*copyrightable work as a production in which thoughts or sentiments are expressed creatively and which falls within the literary, scientific, artistic or musical domain and in item (ii) defines the author as a person who creates a work with limitation under art 14 where the author is presumed to be the author*".⁹ In 2018, conference on principles of human centric A.I. society published seven core A.I. principles, in 2019 in a discussion, Japan issued the 'A.I. Utilization Guidelines' that had elaborate principles for A.I., which all brought a "*recent amendment to Japan's copyright Law*".¹⁰ The following 3 provisions¹¹ in the amendment to the Copyright have eliminated some barriers it had before regarding AI,

- Art. 30-4, which helps all users analyse and understand the copyrighted works for machine learning,
- Art. 47-4, where electronic incidental copies of works are permitted, without harming the owners' rights.
- Art. 47-5, which helps in data verification by allowing the use of copyrighted works.

From these changes we can see that Japan is taking A.I. development seriously. These changes in coming days will undoubtedly help the country grow in A.I. But, as of now,

⁹ The Copyright Law of Japan, 1970.

¹⁰ Japan amends its copyright legislation to meet future demands in AI, EUROPEAN ALLIANCE FOR RESEARCH EXCELLENCE (2018), <https://eare.eu/japan-amends-tdm-exception-copyright/> (last visited Oct 16, 2021).

¹¹ *Supra note 8*

There is no change in the definition of copyrighted works, even though they are trying to remove the barriers of development in A.I. through the amendments. But, since the definition is not changed yet and in the bill of lading form case, the court said that “*copyright protection can be given only when the thoughts and sentiments of the person creating the work are expressed.*”¹² Here, even though there was a human intervention, but since A.I. created the work and as of now they don't create works with their thoughts and sentiments. Hence, they are not protected.

(B) China

The Copyright law of the people's republic of China in Art. 2 defines the works (After amendmen) as, Chinese citizens means a Natural person, Legal entities or other organization or unincorporated organizations (included after a new revision) whether that is published or not will enjoy copyright protection.¹³

In a recent case of Shenzhen Tencent v. Yinxun (Tencent Dream writer) the district court held that “*a work can be creative in a copyright sense when the factors that show the creator's selections, judgement and skills are present. With works generated by machine learning software, this requirement can be fulfilled to the extent that humans are involved in selecting factors such as the format of the Data fed into the algorithm and the rules that the software must follow.*”¹⁴ The plaintiff is a legal entity and they published an article which was written using an AI and the defendant copied the same without the plaintiff consent. The court decided that the requirements of a work are met. So, the work is original. Hence, as of now China protects the works which A.I. creates with human intervention.

(C) The United Kingdom

Under sec 178 CDPA, “*protects the work which is the computer generated with no human author for the work*” and in sec. 9(3) of CDPA, “*the author of the work which is computer generated is the person by whom the arrangements necessary of the work is carried out*”.¹⁵ Works created without a human author are protected, so A.I. created works with human interference is well protected under the statute.

In 1985's Express Newspapers plc case, the Daily Express newspaper had distributed cards with a five-letter code, recipients could check against a daily AI-generated newspaper grid to

¹² Bill of Lading Form, 1 Chosakuken Hanreishu 3 (1965, Tokyo District Court) 12-15.

¹³ The Copyright law of the People's Republic of China, 1990.

¹⁴ Shenzhen Tencent v. Shanghai Yinxun (2019) Yue 0305 Min Chu No. 14010.

¹⁵ The Copyright, Designs and Patents Act, 1988.

see if they had won a prize.¹⁶ They sued the defendant newspaper for copyright infringement after copying these grids, and it argued in defense that because they were AI-generated grids they couldn't be protected. The judge in this case, Justice John Whitford, rejected that argument, stating that "*The computer was only the tool by which the varying grids of five-letter sequences were produced to the instructions, via the computer programs, of [the programmer]. It is as unrealistic [to suggest the programmer was not the Author] as it would be to suggest that, if you write your work with a pen, it is the pen which is the Author of the work rather than the person who drives the pen*".¹⁷

III. A.I.'S AUTONOMOUS CREATION

We discussed the situation where A.I. creates work with some human interference like the arrangements are provided. As the technology is overgrowing now artificial intelligence can create works with its creativity with no human input.

Japan doesn't even protect A.I.'s works with human interference, so considering this situation doesn't arise. When "*Japan in 2017 provided a residence permit for the chatbot Shibuya Mirai under a special regulation*".¹⁸ Even though, this activity contravenes Japan's rules on obtaining a resident permit, it was thought they would bring out friendly provisions concerning A.I.

A case in China has resulted in the protection of artificial intelligence-generated works, but the Tencent Dream writer's case has established that the creator's skill should be present and that when A.I., skills, and judgement create the works are considered to the extent that humans are involved, human intervention is required. China artificial intelligence is developing, and it is expected to become a superpower by 2025, despite the fact that now only works with some human interferences are considered protectable.¹⁹ Within the next two to three years, we can expect to see a development in this field, as people begin to recognize that artificial intelligence (A.I.) work can be both creative and well protected.

The United Kingdom has a provision for computer-generated works, and they protect works created by artificial intelligence (A.I.) with no human intervention, and in circumstances where there is no human author, according to Art. 9(3), "*author is considered to be the person who makes the*

¹⁶ Express Newspapers plc v. Liverpool Daily Post & Echo (1985)3 All ER 680.

¹⁷ *Id.*

¹⁸ Prajakta Hebbar, *After Sophia It's Mirai: Japan Grants Its First Residency To AI*, ANALYTICS INDIA MAGAZINE (2017), <https://analyticsindiamag.com/sophia-mirai-japan-grants-first-residency-ai/> (last visited Oct 2, 2021).

¹⁹ Fabian Westerheide, *China – The First Artificial Intelligence Superpower*, FORBES, <https://www.forbes.com/sites/cognitiveworld/2020/01/14/china-artificial-intelligence-superpower/> (last visited Oct 17, 2021).

necessary arrangements for the creation of the work." However, we have progressed to the point where human intervention is no longer required to make the necessary arrangements. They have the ability to make decisions and create works even in the absence of humans. If we take another interpretation, we believe they were referring to the fact that the person who programmed the A.I. The Cummins case was a landmark decision where court held that the non-human nature of works should not be a barrier to the exercise of copyright.²⁰ This decision is very old, so the only way to clear up any confusion about it is to go through a series of cases. But one thing is certain: the United Kingdom protects works that are the autonomous creation of artificial intelligence.

IV. AI AS AUTHORS

In U.S. congress commission on new uses of Copyright concluded A.I. as a creative tool. For the works *"copyright authorship is assigned to whom-so ever designed, programmed, or deployed the machine to generate the resulting work just as one would assign a copyright authorship to whom so ever employed a paintbrush, saxophone, or word processor to generate a creative work. There was no issue of authorship for brushes and all although they also had a direct involvement in the act of expressive creation. So Copyright is rather an entitlement assigned to only humans"*.²¹ This was the situation many decades ago. But now machines started displaying intelligence, A.I. creations offer independent and autonomous creation. Human instigation and direction seem remote or attenuated in the A.I. context.²² For instance, the Next Rembrandt, a computer-generated 3D artwork, which analyzed 346 paintings by a 17th century Dutch artist, and worked on facial recognition algorithm, is an epitome of creative A.I.²³

The primary argument against giving A.I. authorship is that there are not creating something original and the human data and based on that they are creating works. Here, if we see, no expression can or originates entirely from any author. A considerable amount of recent scholarship has gone toward the expression from the mind of the creative genius. Artist's influence learns and borrow from one another, from their surroundings etc.²⁴ Similarly, A.I. also learns from the data provided and learns from that and creates its works. Whether then

²⁰ Cummins v. Bond (1927)1 Ch. 167.

²¹ Final Report on the National Commission on New Technological Uses of Copyrighted Works, 3 Computer L.J. 53 (1981), 53.

²² DAN L. BURK, *Thirty-Six Views of Copyright Authorship, By Jackson Pollock* (2020), <https://papers.ssrn.com/abstract=3570225> (last visited Aug 27, 2021).

²³ Shlomit Yanisky Ravid, *Generating Rembrandt: Artificial Intelligence, Copyright, and Accountability in the 3A Era--The Human-like Authors are Already Here- A New Model* 69 (2017).

²⁴ BURK, *supra* note 21.

the works created by A.I. can be original?

As A.I. becomes more advanced, roles delegated to A.I. allow the A.I. system to make its own choices more freely, and it can become increasingly difficult to tell with certainty who created or made the required arrangements for the development of a work or whether anyone made the arrangements at all. In the scenario where A.I. is fully autonomous, if no person made the arrangements necessary for creating a work that requires originality for Copyright to exist, then whether we can consider A.I. as the Author. But authorship is given only to natural or legal persons. We do not consider A.I. being a legal entity. whether A.I. should be considered for granting legal personhood? For the work to be protected and AI to be considered as authors, the important thing is works generated must be original. Hence first let's have a look at that.

(A) The originality of A.I. works

Originality is the fundamental yardstick used by the copyright regimes to test copyright protection to a particular work. The basic concept is that it should not be copied, originate from the Author. The idea of originality varies from country to country. Different doctrines have been used to define the concept of originality.

1. "Sweat of the brow" doctrine.

This doctrine is followed in the United Kingdom. For the works to get copyright protection, it is sufficient that there are authors of skill and labor. They adopted the doctrine in *Walter v. Lane* case, where an oral speech was reproduced exactly same in a newspaper report, and the court held that the work is copyrightable because of the labor of the author.²⁵ In *University of London* case, court linked originality with the sweat of the brow doctrine and held that for a work to be original we should not copy it from another work.²⁶ India, till 2008, also followed this doctrine.

2. USA'S Modicum of creativity

In *Feist publications Inc. v. Rural telephone service co. Inc*²⁷, the court rejected the sweat of the brow doctrine, saying it did not determine the originality and introduced the new doctrine. As per the doctrine, for a work to be original, the Author should independently create the work and possess minimal creativity. In the case of *D B Modak*, the S.C. of India discarded the sweat of the brow doctrine and shifted to the modicum of creativity, i.e., the minimum

²⁵ See *Walter v. Lane* (1900) AC 539.

²⁶ See *University of London press v. university tutorial press* (1916) 2 Ch 601.

²⁷ See *Feist publications Inc. v. Rural telephone service co. Inc.* (1991) 499 U.S. 340.

requirement of creativity.²⁸ There must be some substantive variation in the work for it to be copyrightable. When the works are created by A.I. independently, they fulfil the first essential condition that originates from the Author; skill and labour will also be there now. The question is whether the work constitutes a minimum level of creativity. A.I. over the past years has grown exponentially. Started as a tool to create works, now creates its own works. To understand whether A.I. works can be creative, we can have a look at the features provided by Author Shlomit.²⁹

1. Because of the machine learning in A.I., it can create entirely new and original works.
2. A.I. can, with data provided to learn can create independent and autonomous works with no external interference.
3. A.I. systems are based on algorithms through which they can make unpredictable and new works.
4. They not only learn from the data provided but also search for outside data.
5. Learning capability helps them learn from their mistakes through feedback and improve the results.
6. A.I. system is continuously developing.
7. A.I. is more accurate and efficient.
8. A.I. systems are goal-oriented.

So, A.I. works can be more original and creative. "*A.I. systems will develop new artworks without significant guidance or instructions from humans*".³⁰ But the current copyright law provides authorship only to a natural or legal entity. Further we will have a small look into the legal person hood of A.I. But has not discussed in detail because the paper is limited to the authorship and protection of works.

(B) The legal personhood

A.I. to be an author, it is essential that A.I. is a legal person. Black law's dictionary defines a Legal entity as a "lawful or legally standing association, corporation, partnership, proprietorship, trust, or individual. It has the legal capacity to enter contracts, assume obligations, incur and pay debts, sue and be sued in its own right, and to be accountable for

²⁸ See D B Modak and Anr v. Eastern book company and Ors. 2008(1) SCC 1.

²⁹ Ravid, *supra* note 23.

³⁰ RYAN ABBOTT, *THE REASONABLE ROBOT: ARTIFICIAL INTELLIGENCE AND THE LAW* (2020).

illegal activities.”³¹ For conferring rights and liabilities for A.I., we should consider it as a legal entity.

Over the years, many precedents have been established, and a pertinent example is a case of 'computer raped by telephone' which widely covered by the media. Here, a computer programmer broke into a computer to steal private data by using a telephone link. During the investigation a search warrant was issued to the computer to examine its data and components. It was the first case where the world witnessed that a machine was being treated like a legal person.³² By providing legal personhood to ai entities, it will help to tackle the upcoming challenges by A.I. In future, A.I. can be seen in almost all areas, and when it hurt someone or causes some damage, the person held liable would be the creator or Author for no-fault, which cannot be a good idea when they had no such intention. The possibilities of strong A.I. doing such an act is very high. We can see that A.I. is developing in unexpected ways, solving problems it was not supposed to do.

The European Parliament adopted a resolution calling on the Commission to consider the long-term establishment of robots' exact legal status.³³ So that at least the most advanced autonomous robots may be defined as having the status of electronic persons responsible for repairing any damage, they may cause and probably applying electronic personality to cases where robots render autonomous works.³⁴ Later they dropped the idea.

In 2017, robot Sofia was provided citizenship of Saudi Arabia, and chat bot Shibuya Mirai was provided a residence permit, but both were against the country's existing laws.³⁵ Without an identity A.I. cannot have rights nor can sue or be sued. We can consider it being a juristic person, artificially created person recognized by law. Similar way as we grant religious idols identity, where they can hold property and also pay taxes. But unlike idols, A.I. being more capable, it is better to grant legal identity than considering being a juristic person. But unlike others if A.I. can act on their own whereas in other cases a human is behind them. Leaving it unattended will not solve the problem. Proper consideration is necessary for better innovations and it encourages development in A.I. research.

³¹ Legal Entity, BLACK LAW'S DICTIONARY (10th ed. 2014).

³² See *Ward v. Superior Court of California* [1972] 3 C.L.S.R. 206. c (Shubham Singh, *ATTRIBUTION OF LEGAL PERSONHOOD TO ARTIFICIALLY INTELLIGENT BEINGS*, *Bharati Law Review* (2017)).

³³ *Artificial Intelligence and Civil Liability*, 136 (2020).

³⁴ A. Atabekov & Oleg Yastrebov, *Legal status of artificial intelligence across countries: Legislation on the move*, 21 *EUROPEAN RESEARCH STUDIES JOURNAL* 773–782 (2018).

³⁵ Hebbbar, *supra* note 18.

(C) The Current stance of Japan, The United Kingdom and China.

Only one case since the enactment of the U.K.'s copyright law in 1988 has considered authorship of AI-generated works. In 2006's Nova Productions Ltd case, the parties were competing manufacturers of pool video games.³⁶ The plaintiff claimed Copyright in the game's graphics and the frames A.I. generated that based on player commands. The judge in this case, Justice David Kitchin, considered the frames to be computer-generated works even though a person designed the components.³⁷ The court held that the Author of the works was the company director responsible for developing the game, rather than the player who "*contributed no skill or labour of an artistic kind.*"²⁹ But if A.I. provides the skill, the matter still unresolved. Both Japan and China also do not recognize A.I. as authors. But recently in India an A.I. Raghav was named as a Co-Author. But did not went on to consider them as a sole Author.

1. Ownership of the works

The inventor or the author is considered to be the first owner of the work. But AI is not considered to be an author so they cannot be the owner, even if they are considered as the author the ownership to be either given to be the AI developer or the person using the software, and in case of an employee to their employer. An important judgement regarding the same was decided by the Chinese court in the below case.

In the Feilin's case, even though the court refused to protect the work created by a software and they found treating a computer or software as authors unreasonable.³⁸ But the court had some important findings in the case. The issue in the case was in relation to a report generated by a software called Wolters Kluwer, which is a legal information tool. According to the plaintiff after AI generated the report, they had modified the same. For the written part, the teams used the tools to search the decisions depending on the plaintiff's criterion.³⁹ The team then went through the search results and eliminated any court rulings that were not applicable. After that, the team analyzed the data and produced the paper. The defendant argued that since the report was fully generated by the AI and hence it did not have copyright so, they using the same will not be an infringement.

The court held that since there was a human input and created by the team it was original and

³⁶ Nova Productions Ltd v. Mazooma Games Ltd. (2006) EWHC 24.

³⁷ *Id.*

³⁸ Feilin v. Baidu (2018) Beijing 0491 Minchu No. 239.

³⁹ *Id.*

protectable because the report had a choice, judgement and analysis of the relevant data.⁴⁰ They wanted the involvement of a natural person to be there for such works to be protected. But the court also considered the authorship of the work and held that AI cannot be considered an author and they did not even want the software developer or the software user to be considered the author. The software developer doesn't use the key words to conduct search and they don't create the report. Even though the software user chooses the keywords for searching the report was automatically generated. And the report also is not protected, but the court did not want them to be in public where anyone can use it. The developer had an investment in creating the software and also the software user had given payment for using the same. If they are not given consideration then in future there will not be any motivation for them to create such works. Even though they cannot be considered as the author the interests should be shared among them to protect their legal interest. The court considered the need for the consideration of the investment or else the way in which it can affect the further development.⁴¹

V. THE PROVISIONS IN INDIA

In India, sec 2 (d) of the copyright act, 1957 defines author regarding copyrightable works means “*concerning any literary, dramatic, musical or artistic work which is computer-generated, the person who causes the work to be created.*” So, the definition does not mention whether the Author to be a natural or a legal person. A.I. creates works under computer-generated works, but the A.I. system cannot be considered the Author. But we protect the computer-generated, with or with no human interference, the provision we adopted from the U.K.⁴²

In the practice and procedure guidelines in the year 2018, which the copyright office issued, for the application for the registration of works, in the Colum of who created the works, only the natural person's name may be provided.⁴³

Recently India recognized AI, RAGHAV Artificial Intelligence Painting App as the co-author and recognized and granted copyright protection to such works. The title of the works is “Suryast.”⁴⁴ The first and only country to do so. According to Mr. Sahni, another co-author,

⁴⁰ *Id.*

⁴¹ *Id.*

⁴² The Copyright, Designs and Patents Act, 1988, sec. 9(3) (United Kingdom).

⁴³ The Practice and procedure Manual, Copyright office, Government of India (2018).

⁴⁴ See Exclusive: India recognises AI as co-author of copyrighted artwork, , MANAGING INTELLECTUAL PROPERTY, <https://www.managingip.com/article/b1t0hfz2bytx44/exclusive-india-recognises-ai-as-co-author-of-copyrighted-artwork> (last visited Sept. 22, 2021).

the Copyright Office only accepted the application with both of their names included as co-authors of the artistic work. But failed to acknowledge the same as an independent author. This can be a stepping stone for other countries to follow and think about AI as an Author. As of now, only the works with human intervention are protected except in countries like UK, Ireland, and India.

In many jurisdictions one of the main issues for considering AI as an Author is to calculate the term of protection. In India as per sec 22, the term of Copyright is life plus 60 years. From this, we can conclude is that the legislators intended to include only living beings similar to many other jurisdictions. So even if it is provided, then as per the current provisions, Copyright will be permanent.

Hence the Author should be a living being or a corporation is comprising a living being. Otherwise, we should incorporate the trips provision which says about how to calculate the term in case of other than human.⁴⁵

We regard the Author of the work as the first owner of the work under Section 17 of the Copyright Act 1957. In such cases, however, the rights of ownership are transferred under an agreement to the employer or to the person in whose case the work is created.⁴⁶ Therefore, the transfer of ownership would be challenging in A.I., as the A.I. cannot authorize. Developments are going in A.I., as the Ministry of Industry and Commerce in India. After considering the importance and relevance of A.I. and addressing the inability of the existing laws to deal with A.I., the ministry has constituted a member task force, comprising experts, academics, along with active participation of government bodies mainly to explore the possibilities to leverage A.I. for development across various fields. It has laid down many recommendations and also on the areas we have to focus on. Also intimated the department of industrial policy and promotion to set up and fund an Inter- Ministerial National Artificial Intelligence Mission for five years to coordinate all A.I. activities in India.

It was important for India to step forward with a privacy policy that addresses A.I.'s privacy aspects with its rapid development. Data protection 2019 is based on the European Union general data protection regulation.⁴⁷ The Sri Krishna Committee Bill aims to establish an accountability mechanism for using emerging technologies, including A.I., to ensure that businesses prevent harm. While not as comprehensive as the GDPR, criteria allowed the

⁴⁵ The TRIPS, 1995, sec. 12.

⁴⁶ The Copyright Act, 1956, sec. 17 (India).

⁴⁷ India Draft Personal Data Protection Bill, <https://iapp.org/resources/article/india-draft-personal-data-protection-bill/> (last visited Sep 26, 2021).

provisions such as fair and rational processing, data quality assurance, and the enforcement of privacy principles.⁴⁸ Under the Sri Krishna Bill, the DPA may monitor technical innovations and business practices that may affect personal data security and encourage initiatives and research for personal data protection innovation.

VI. CONCLUSION

When it comes to dealing with artificial intelligence, the current legislations in the selected jurisdictions are insufficient. Despite the fact that many countries are introducing new amendments and policies that are having an impact on the development of artificial intelligence, However, when it comes to A.I. authorship, a positive approach is not demonstrated.

The person who programmed A.I. or provided Data is credited as the author of the works created by A.I., whether with or without the assistance of human beings. A number of countries do not even protect the works of art that are the result of machine work that was created independently. Taking credit for an A.I. work would not matter to a machine, but taking credit for a human-created work would diminish the accomplishments of people who have legitimately created copyrightable works. When we give authorship to someone other than the A.I., which created independent works, it is similar to someone enjoying the fruits of another's labor.

As a result, it is essential to grant A.I. authorship for their works in which there is no human authorship. A.I. should be considered co-authors of copyrighted works in the case of human works if it makes an equal contribution to the original work.

Artificial intelligence (A.I.) is the future. The importance of proper consideration cannot be let off. The question of who will be held accountable for the actions taken by A.I. is also one that must be addressed. When they create something, A.I. must be taken into consideration for authorship. If it is necessary for them to become a legal person for considering them as author. Then that option must be looked into further. Art. 12, TRIPS⁴⁹ has a provision for considering other than a natural person as the author, and also the term of protection is also different from a human author. This doesn't mention the author to be a person, and this can

⁴⁸ EU General Data Protection Regulation (GDPR) – Official Legal Text, GENERAL DATA PROTECTION REGULATION (GDPR), <https://gdpr-info.eu/> (last visited Oct 1, 2021).

⁴⁹ The TRIPS Agreement, 1995, art.12– Term of Protection, Whenever the term of protection of a work, other than a photographic work or a work of applied art, is calculated on a basis other than the life of a natural person, such term shall be no less than 50 years from the end of the calendar year of authorized publication, or, failing such authorized publication within 50 years from the making of the work, 50 years from the end of the calendar year of making.

be incorporated into the national legislation.

Providing A.I. with Sui Generis protection is not a bad idea. It is necessary to take advantage of new technologies, for that making changes in the existing laws may be cumbersome and hard. But a "clear and stable legal framework" is essential for ensuring the security of such financial investments. As an alternative, we can think about a sui generis system for AI-generated outputs – whether works of art or inventions – could be a suitable solution in light of the need to provide legal certainty as well as a predictable and reliable legal environment for A.I.

And also, regarding ownership and its benefits, if it is not attributed to the human involved there are chances of less development in technology. The developer puts forth a great deal of effort into developing A.I. As a result, if there is no protection, the development of artificial intelligence will be hampered. Even though artificial intelligence (A.I.) does not require any incentives to produce works, humans does require incentives to continue to develop A.I.

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