

**ARTIFICIAL INTELLIGENCE AND COPYRIGHT LAW: AN  
ENTREATY FOR LEGAL FRAMEWORK WITH SPECIAL  
REFERENCE TO TRIPS AGREEMENT**

*Dr. Vidhi Shah\**  
*Ms. Aishvi Shah\*\**

***Abstract***

*Copyright laws are designed to protect the rights of creators of artistic, literary, architectural, and dramatic works. However, with the rise of artificial intelligence (AI) and the internet age, artistic works are now also produced by machines. AI is designed to mimic human intelligence by processing data and making decisions, with capabilities such as facial recognition and voice recognition. The question of who owns the copyright in a work generated by an AI is a topic of discussion. The law on copyright is silent on this matter, as it was created to protect works that involve human intervention. Traditional copyright frameworks do not apply to works created by machines. With the ongoing technological advancement, policymakers should consider revising copyright laws to provide strong legal provisions for AI-generated works. As AI-generated works become more common, it is important to address the issue of copyright ownership. In the case of AI-generated works, the creator of the AI program may claim ownership, but this may not always be the case. The AI program may be capable of creating works that are entirely original and beyond the scope of the programmer's intention. In such cases, the ownership of the work may be disputed. Some experts have suggested that the AI itself should be granted ownership of the work it creates. This would require a fundamental shift in the way we think about copyright ownership, but it may be necessary to ensure that AI-generated works are not unduly restricted. In conclusion, the question of who owns the copyright in a work generated by an AI is a complex issue that requires careful consideration. Policymakers should work to develop legal provisions that account for the unique nature of AI-generated works and*

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\* Assistant Professor, GLS Law College, Ahmedabad.

\*\* Research Scholar, GLS University, Ahmedabad, Assistant Professor, Parul University, Vadodara.

*ensure that creators, programmers, and AI systems themselves are all fairly compensated for their contributions to these works.*

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“Artificial Intelligence is the science and engineering of making intelligent machines, especially intelligent computer programs”.

–John McCarthy- Father of Artificial Intelligence

## **Introduction**

Artificial Intelligence (AI) has gained widespread momentum in today's technological world. With lightning-fast development in this field, it is only a matter of time before these systems produce extraordinary inventions without any human intervention. According to Britannica, AI refers to the ability of a digital computer or computer-controlled robot to perform tasks commonly associated with intelligent beings.<sup>1</sup> AI development has led to the creation of non-human entities generating scientific, artistic, and industrial outputs that meet the requirements to be protected as intellectual property (IP).<sup>2</sup> AI is a mechanical simulation system that collects knowledge and information, processes intelligence of the universe, and collates, interprets and disseminates it to the eligible in the form of actionable intelligence.<sup>3</sup> The domain of AI shares a deep nexus with the regime of Intellectual Property Rights. Recent developments in the AI regime have augmented a race amongst the world's leading technological firms to seek legal protection using the existing IP legal framework. The rapid development in the field of AI technology is directly influencing the existing IPR legal regime, with no scope for it to evade the same. With each phase of development in technologies, AI continues to change the way we interact with the world.

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<sup>1</sup> Nivedita Gajjar & Ravi Thakur, "AI: Artificial Intelligence and Accidental Intrusive," 1 J. Artificial Intelligence (2019), <https://glslawjournal.in/index.php/glslawjournal/article/view/3/> (last visited Mar. 29, 2023).

<sup>2</sup> Fredy Sánchez Merino, "Artificial Intelligence and a New Cornerstone for Authorship," [https://www.wto.org/english/tratop\\_e/trips\\_e/colloquium\\_papers\\_e/2018/chapter\\_3\\_2018\\_e.pdf](https://www.wto.org/english/tratop_e/trips_e/colloquium_papers_e/2018/chapter_3_2018_e.pdf) (last visited Mar. 24, 2023, 12:50 PM).

<sup>3</sup> Dalvinder Singh Grewal, "A Critical Conceptual Analysis of Definitions of Artificial Intelligence as Applicable to Computer Engineering," IOSR J. Computer Engineering, Mar.-Apr. 2014, at 9:13 a.m.

technologies, has impacted and moulded the human civilization, its culture and economy significantly. To some extent, we may say that today's emerging technologies are shaping the human world at a much deeper and faster pace. The nexus of human society and technologies, on the one hand, has offered tremendous potentialities for growth and abundant solutions to mankind in diverse fields; however, on the other hand, it has challenged human society with unprecedented complexities and novel challenges. Presently, the world is basking with the achievements of a unique technology i.e., AI and is ready to unleash its various possibilities to harness the benefits for human society. In today's time, the greatest asset is the human mind which includes intellect and creativity. To protect this intellect and creativity the need for the development of Intellectual Property Law was popped up.

### **Interface Between AI and IPR**

Intellectual property can be defined as a conceptual or virtual product produced from the intellectual capacities of a certain person. For example, an author produces a work by writing a book. A picture painted by a painter, an Engineer creates a plan, it is his intellectual property. Thus, anything and everything which is a creation of a person's mind, such as a book, a picture, a song, a musical note, a design, a product etc., is an intellectual property of that person created out of his mind and intellect. AI is presently associated with various facets of human development, novel creations, innovations, etc., whereas on the other hand, the IPR regime also deals with the regulations as well as facilitation of similar facets. Thus, both these regimes share a deep and mutual nexus.

Francis Gurry the Director General of WIPO at Global Assembles expressed his view on the various implications of developing AI vis-à-vis IPR law and its existing policies in coming years worldwide.<sup>4</sup> He stated that “AI will have enormous technological, economic, and social consequences and is going to transform the way we produce and distribute goods and services, as well as the way we work and live.”<sup>5</sup> In recent years AI lead successful innovations are becoming more and more evident in the creative fields of human society like art, literature, music, design, etc.

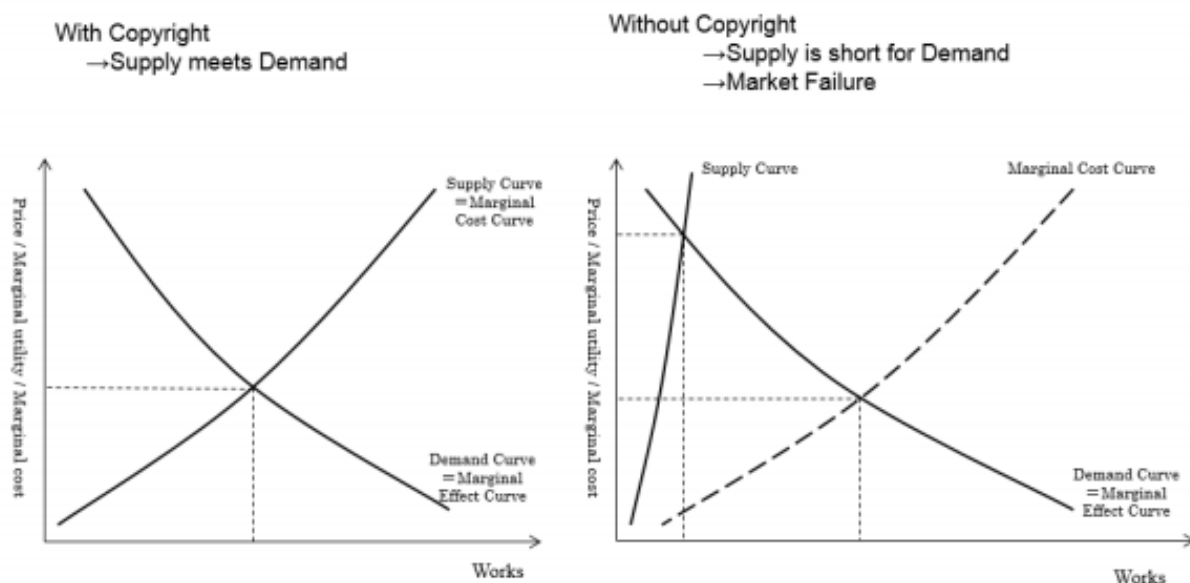
### **Can Artificial Intelligence Get Copyright?**

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<sup>4</sup> WIPO Magazine, "Artificial Intelligence and Intellectual Property: An Interview with Francis Gurry," September 2018, [https://www.wipo.int/wipo\\_magazine/en/2018/05/article\\_0001.html](https://www.wipo.int/wipo_magazine/en/2018/05/article_0001.html) (last visited Mar. 24, 2023, 12:00 PM).

<sup>5</sup> Prof. John McCarthy, "What is Artificial Intelligence?" <http://jmc.stanford.edu/contributions/index.html> (last visited Mar. 27, 2023, 12:30 PM)

Artificial Intelligence has set a profound base for the digital and technological revolution, bringing momentum in the area of computer science while also working as an efficient catalyst to increase the rate of technological advancement. Since AI has not attained the status of a legal person, it fails to hold the ownership of the copyright. But before we enter into the legislation and jurisprudence, let us understand the concept of copyright in terms of economics. Copyright fulfils two purposes in terms of economy. First, to use the original work of the author, the user has to pay a certain amount of price to the author to enjoy his work. Second, the copyright protection bestowed upon the author would stop others from earning from the intellectual labour of the author and the author can use the income to increase the supply of work. In other words, the purpose of copyright is to ensure that the demand and the supply in the market reach an equilibrium<sup>6</sup>. Thus, the supply side needs copyright protection to earn money to produce more supply while the demand side is bound to pay a price to use the copyrighted work. But if there is any change in the demand side or the supply side, it would affect the market equilibrium. Let us understand it with a graph<sup>7</sup>



If the AI work is under the protection of the copyright jurisprudence and the ownership rights of the said work are bestowed to the operator of AI, the operation can simply increase the output of the AI-generated work by increasing the AI and feeding the computer more and more data. Here, it would simply allow the operator of AI to gain more and more copyright over the

<sup>6</sup> William Landes & Richard Posner, *An Economic Analysis of Copyright Law*, 18 Leg. Stud. 325, 344-352 (1989).

<sup>7</sup> Takashi B. Yamamoto, *AI Created Works and Copyright*, Patents & Licensing, Vol. 48, No. 1, 1, 7 (2018)

work where he did not include any intellectual labour. This would enhance the supply of work in the market while the demand remains the same and therefore, lead to market failure. This economic analysis clearly states how the market will act after the development of AI in generating copyrightable work. If the operator of AI is allowed to get the copyright, he would be getting the copyright of those works in which he would have not provided any intellectual labour in the work. But if the legislation declares that the work of AI would not be copyrightable, it would simply ruin the demand side of the market as no one would pay a price to enjoy the work of the original artist.

If we take the example of Music then composing music requires a certain set of skills and a deep understanding of music, which includes understanding different musical notes and also how these notes are played in different instruments. Further, the lyrics to be set in the manner that they rhyme and set with the music.<sup>8</sup> Even after that, the composer still might not get his defining style of composition. On the other hand, AI can learn and understand the style of the composer within minutes and produce a song with a little creative input from the human composer.<sup>9</sup> This would amplify the supply of the musical work tremendously while the demand stays the same. So, if the operator of AI is given the authorship of the composition, the operator can produce a huge amount of musical work in no time and burden the copyright registry with new copyright forms every second. It would seem that getting the copyright would take more time than making the copyrightable work since the data is already fed to AI. On the other hand, if the composition composed by AI is not considered a copyrightable work and people can access the AI work without paying a price, the listeners are easily able to get the musical composition of a very similar style free of cost. In other words, the market equilibrium would be affected tremendously irrespective of whether the work of AI gets the copyright or not, or even who gets the copyright.

However, the existing legislation is apt only for the current situation where AI has not developed and it still does require the creative and intellectual input of humans to produce a work that just might clear the Turing Test. But in the future, where AI is simply able to generate work without the help of humans and can clear the Turing Test, the current legislation

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<sup>8</sup> Lizzie Plaugic, Musician Taryn Southern on composing her new Album entirely with AI, The Verge, Aug. 27, 2017, at <https://www.theverge.com/2017/8/27/16197196/taryn-southern-album-artificial-intelligence-interview>.

<sup>9</sup> Olivia Goldhill, The First Pop song ever written by Artificial Intelligence is pretty good, actually, Quartz, Sept. 24, 2016, at <https://qz.com/790523/daddys-car-the-first-song-ever-written-by-artificial-intelligence-is-actually-pretty-good/>.

would only be the portent to market disruptions. With this, let us see how different legislation is tackling the grey area of AI in copyright.

In 2019, an AI-generated painting sold for over \$400,000 at an auction in New Delhi, with the artist credited as the AI system itself. Similarly, in 2021, an AI-generated poem was registered for copyright protection in India, with the author listed as "AI Dada."<sup>10</sup>

## **International Scenario of AI And Copyright Law**

### **Provision in U.K**

The UK copyright jurisprudence is very clear that the author of the copyrightable work done by any AI or rather any computer would be the person who is necessary for the creation of the work. The same is true with the Indian Copyright Act of 1957. The said act defines the author about any literary, dramatic, musical or artistic work which is computer generated, the person who causes the work to be created shall be considered to be an author.<sup>11</sup> So, for example, a photograph is a computer-generated expression of a work, but since it is the photographer who has applied his skill and intellectual exertion in taking the photo, the photographer shall be awarded the title of the photograph.<sup>12</sup>

### **Provisions in U.S.A**

Copyright jurisprudence of the United States of America, the author of the work obtains the copyright over the work. Copyright owner '*concerning any one of the exclusive rights comprised in a copyright, refers to the owner of that particular right.*'<sup>13</sup> Further, the statute states that 'Initial Ownership' is defined as the copyright in a work protected under this title vest initially in the author or authors of the work.<sup>14</sup> However, the Copyright law of the United States of America defines neither 'work of authorship' nor 'author' as it was purposefully left undefined to provide for some flexibility.<sup>15</sup> However, the official registry of copyright defines the author as the creator of the '*original expression*' in the work. This gives the AI a little ray of hope.

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<sup>10</sup> Balwant Singh, Artificial Intelligence and Copyright in India: Understanding the Legal Landscape, access on May 26, 2023

<sup>11</sup> Clause d(vi) of Section 2 of the Copyright Act, 1957, No. 14, Act of Parliament, 1957 (India).

<sup>12</sup> Burrow-Giles Lithographic Co. v. Sarony, 111 U.S. 53, 58 (1884).

<sup>13</sup> Copyright Law of the United States and Related Laws Contained in Title 17 of the United States Code, 17 U.S.C. § 101 (2016).

<sup>14</sup> *ibid*

<sup>15</sup> Gracia v. Google Inc., 786 F.3d 733, 741 (9th Cir. 2015).

But to crush that ray of hope of AI to get a copyright or even just be recognized as an author, the Compendium of U.S. Copyright Office Practices clearly states that the Copyright Registry will only give the authorship of the original work only when the work is created by a human being.

The Hon'ble Supreme Court of the United States of America observes in the case of Twentieth Century Music Corp. v. Aiken,<sup>16</sup> while referring to Fortnightly Corp. v. United Artists Television<sup>17</sup>:

*“Creative work is to be encouraged and rewarded, but private motivation must ultimately serve the cause of promoting broad public availability of literature, music, and other arts. The immediate effect of our copyright law is to secure a fair return of an ‘author’s creative labour’. But the ultimate aim is, by this incentive, to stimulate artistic creativity for the general public good... When technological change has rendered its literal terms ambiguous, the Copyright Act should be construed in light of this basic purpose.”*

The above judgement recognizes the need for certain amendments in the current legislation, but sadly, there hasn't been any which acknowledges the AI as a legal person.

### **Provision in the European Union**

27 countries are members of the European Union. As per the Provision of the EU, the original owner gets protection under the Copyright Act. With the development of AI-generated work, issues have arisen, as to the ownership of the work created by the AI, The EU is going to introduce the new copyright rules for the AI-generated work. The major question is who would be the owner of the work created by chatGPT and many other tools. Under the EU the companies creating work by AI have to disclose the amount of copyrighted work used by the company. "In its landmark *Infopaq* judgment of 2009, the Court of Justice of the EU (the “CJEU”) established an autonomous concept of the EU law of the work as “*the author’s intellectual creation*” (“AOIC”), which was further confirmed by the CJEU in *Levola*, *Funke Medien* and *Cofemel* judgements of 2019.”<sup>18</sup>

### **CAN AI BE CALLED AUTHORS?**

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<sup>16</sup> Twentieth Century Music Corp. v. Aiken, 422 U.S. 151 (1975).

<sup>17</sup> Fortnightly Corp. v. United Artists Television, Inc., 392 U.S. 390 (1968).

<sup>18</sup> Supra 16



In terms of legislation, it is abundantly clear that AI or any computer-generated work would not hold the authorship, rest assured the copyright, over any kind of work done by them. Even if the legislation does not put a blanket ban on the same, the compendium or the rules of the Copyright registry would not accept the work as copyrightable until and unless there is human involvement in expressing the idea via the work.<sup>19</sup> However, that would not be the case in terms of jurisprudence developed by the judiciary over the course of the period. It is indeed true that the judiciary cannot go against the bare enactment and pass a judgment, but if we simply go by the jurisprudence laid down by the judiciary in understanding the term author, we would find that the work generated by AI fulfils all the required criteria of being the author of the original work.

The basic jurisprudence of authorship states that the person who creates an expression via literature, drama, music, art, cinema, photograph or sound recording, etc. The jurisprudence of the United States of America in understanding the term author is splendid. As per the Supreme Court of the United States of America, authors are those who are responsible for the creation of the tangible literary form, that could be read by others, and could have claimed copyright for themselves as 'authors,' because they were responsible for the revelations appearing 'in such a way as to render the work as a whole original.'<sup>20</sup> While the 9th Circuit Court of Appeal tried to define an author as someone who superintends the work by exercising control. This will likely be a person who has formed the picture by putting the persons in position and arranging the place where the people are to be.<sup>21</sup> In the case of music composition,<sup>22</sup> the AI is fed 13,000 lead sheets from different styles and composers to understand and process the same. The musicians here only have to feed the system which style of music they want the AI to compose and the AI would do the same. Since the AI is not that developed, the musicians still need to give input and finalize the production and the mixing of the composition created by the AI. In such a case, it wouldn't be wrong to state that the work would be rather computer-assisted since human involvement is an essential creative input for the composition.<sup>23</sup> But since AI is trying to move rapidly towards clearing

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<sup>19</sup> Copyright Law of the United States and Related Laws Contained in Title 17 of the United States Code, 17 U.S.C. § 102(b) (2016).

<sup>20</sup> *Fiest Publication Inc. v. Rural Telephone Services*, 499 U.S. 340, 345 (1991).

<sup>21</sup> *Aalmuhammed v. Lee*, 202 F.3d 1227, 1234 (9th Cir. 2000).

<sup>22</sup> Sony, AI Makes Pop Music, FLOW MACHINE, Sept 19, 2016 at <http://www.flow-machines.com/history/events/ai-makes-pop-music/>.

<sup>23</sup> William Hochberg, When Robots Write Songs, THE ATLANTIC, Aug 7, 2014 at <https://www.theatlantic.com/entertainment/archive/2014/08/computers-that-compose/374916/>.



the Turing Test, would the stand of musicians holding the authorship of the composition set by the AI still stand justified?

Moving further to the next example of drawing,<sup>24</sup> where the AI was fed all the work of a particular artist and the AI was asked to produce a painting upon the analysis of the given information the production done by AI is fabulous. Here again, we come to the crossroads of determining where exactly is the human involvement in the said painting. It can't be denied that the amount of intellectual labour invested in programming the AI to read and analyse all the work of an artist would be humongous, but the same is being protected by patent and also the computer program is protected by copyright.

Recent court decisions have concluded that an artificial intelligence (AI) cannot be an "author" under U.S. copyright law. The U.S. District Court for the District of Columbia found that human authorship is a requirement for copyright, and a similar ruling was made regarding patent inventorship. These decisions have implications for copyright registration of works created by AI systems. The US Copyright Office refused to grant copyright registration to an image titled "Théâtre D'opéra Spatial," which was created by artist Jason Allen using Midjourney, an AI tool. The office found that the image contained more than a de minimis amount of AI-generated content, triggering its AI Registration Guidance, which requires that non-human authorship elements be disclaimed and excluded from registration. Mr. Allen refused to disclaim the AI-generated material, and the office denied registration of the work in full. As a result, authors who use AI tools to create works of art should keep a log of their contributions and submit such information to the copyright office when seeking registration.

A machine or an AI cannot infringe a copyright. Since AI is ruled out, the liability of infringement would lie either on the creator of the AI or the operator of the AI. The creator of the AI is the legal person who created or rather coded the AI while the operator of AI would be the legal person who simply uses the AI without knowing a deep understanding about how the specific AI works.

### **Conclusion and Suggestions**

The evolution of AI in the past decade and its significant influence, however, on modern-day society shall not go unnoticed as well. Keeping in mind the prospects and possible widespread application of AI in diverse fields in India, there is a need to undertake a compatibility test and analysis to see how far the existing interface of IPR and AIs are mutually compatible to

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<sup>24</sup> Microsoft Reporter, The Next Rembrandt, MICROSOFT NEWS CENTRE EUROPE, April 13, 2016 at <https://news.microsoft.com/europe/features/next-rembrandt/> and <https://www.nextrembrandt.com/>.

facilitate the application and utilization of AIs in future. To start with, it is pertinent to highlight certain challenges which are presently faced by this interface. Leading technological and legal minds need to develop legislative safeguards that will protect employers' IPs from the risks of AI.

- The law ought to mandate that security-oriented AI be developed alongside the functional AI that will be able to police and/or punish AI that compromises IP, and require firms to enact safeguards that minimize risks related to utilizing, selling, transferring and programming AI.
- AI-backed creators may also emerge as significant stakeholders in the Patent and Copyright world seeking and claiming equal as well as adequate IPR protections. Thus, we can aptly say that in the backdrop of the silver lining of recent AI developments, there are emerging grey areas which are posing challenges to the existing fundamental aspects of the IPR regime such as "Inventor, Author/Creator, Composer", etc.
- There is an urgent need to revisit and revise the said fundamental concepts of IPR and, if needed, redefine them to make them suitable enough to encompass the creations and innovations created or generated by AI technologies in future courses.
- If the purpose of copyright is to protect the expression of an idea via work,<sup>25</sup> then it would not be just to provide authorship to the computer programmers for the intellectual labour they have invested in generating the AI. It would be completely just for them to hold the authorship for the computer program of the AI, but it would be wrong to give them the authorship in those works generated by the AI where they have not given any creative and intellectual input.
- The issue of copyright ownership in AI systems arises when they are purchased. The question then is whether the copyright belongs to the creator or the buyer. In countries like England and New Zealand, the copyright in works authored by AI is given to the programmer through legal fiction, and this favours the owner. A possible legal solution to this problem is to expand the definition of copyright to include computer-generated works, which are those lacking a human author (i.e., AIs).<sup>26</sup>

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<sup>25</sup> Eastern Book Company & Ors. Vs. DB Modak & Anr., AIR 2009 SC 809.

<sup>26</sup> Copyright, designs and Patents Act, § 178, 1988 (UK); Copyright Act, § 2, 1994 (New Zealand).

- This amendment does not address the question of the criminal liability of an AI. It is possible that in the future, AIs may become an independent entity, which would pose even more significant challenges.