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Volume 10 Issue 1 | August 2018

₹65 US \$6 UK £4

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Subodh Prasad Deo
Partner, Saikrishna & Associates

P20

expert speak



Sachin Gupta
Partner, Dhir & Dhir Associates

P30

let's arbitrate



S. Ravi Shankar
Sr. Partner, Law Senate

P56

expert speak



Garima Sahney
Partner, Saikrishna & Associates

P26



Niraj Singh
Partner, RMS Associates

P58

TechIPedia

expert speak



Shweta Singh
Partner, Maheshwari & Co.

P64

expert speak



Raei Akhouri
Associate, Singh & Singh

P48

The Great Indian Data Dive:

Good Enough for Now?

P08

expert speak



Nishant Nigam
Partner, Chamber of Nigam & Nigam
Prateek Semwal
Associate, Chamber of Nigam & Nigam

P38

expert speak



Hardeep Sachdeva
Senior Partner, AZB & Partners
Ambika Khanna
Associate, AZB & Partners

P16

expert speak



Mohit Goel
Partner, Sim & San
Sangeeta Goel
Partner, Sim & San

P42



Artificial Intelligence & Copyright

■ **Raei Akhouri**



Artificial Intelligence (AI) is not a new concept and has been studied for decades and even today, it remains one of the most obscure subjects in Computer Science. The term

Artificial Intelligence was coined in 1956 by John McCarthy. However, the journey to understand whether machines can actually think had started long before. In Vannevar Bush's seminal work 'As We May Think', he had proposed a system, which amplifies people's own knowledge and understanding. After 5 years, Alan Turing wrote a paper on the notion of machines being able to simulate human beings and the ability to do intelligent things, such as play Chess.¹

Computer's ability to process logic cannot be refuted; however, it is still unknown to many whether machines can actually think. Over the past few years, there have been remarkable advances in machine learning algorithms, integrating statistical analysis, and search algorithms. But before discussing AI in details, it is important to understand what AI is.

Artificial Intelligence or AI is a branch of Computer Science that aims at creating intelligent machines. Authors Rich and Knight (1994) and Stuart (1996) described artificial intelligence as the capability of machines to perform the same tasks as human beings. According to Farid Fleifel Tapia artificial intelligence as that branch of computer science that studies the resolution of non-algorithmic problems through the use of any available computing technique, regardless of the way of reasoning to the methods that are applied to achieve that resolution.²

HERE ARE A FEW REAL-WORLD EXAMPLES OF AI;

- Siri and Cortana
- Google Maps
- Google Search
- Alexa
- Computers that play chess and video games
- Smart cars like Google's self-driving car & Tesla's autopilot feature; etc.

HOW ARTIFICIAL INTELLIGENCE WORKS

AI works by combining large amounts of data with fast, iterative processing and intelligent algorithms, allowing the software to learn automatically from patterns or features in the data. AI is a broad field of study that includes many theories, methods, and technologies, as well as the following major subfields:

- Machine learning automates analytical model building. It uses methods from neural networks, statistics, operations research, and physics to find hidden insights in data without explicitly being programmed for where to look or what to conclude.
- Neural network is a type of machine learning that is made up of interconnected units (like neurons) that processes information by responding to external inputs, relaying information between each unit. The process requires multiple passes at the data to find connections and derive meaning from undefined data.
- Deep learning uses huge neural networks with many layers of processing units, taking advantage of advances in computing power and improved training techniques to learn complex patterns in large amounts of data.



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Common applications include image and speech recognition.

- Cognitive computing is a subfield of AI that strives for a natural, human-like interaction with machines. Using AI and cognitive computing, the ultimate goal is for a machine to simulate human processes through the ability to interpret images and speech – and then speak coherently in response.

- Computer vision relies on pattern recognition and deep learning to recognize what's in a picture or video. When machines can process, analyze and understand images, they can capture images or videos in real time and interpret their surroundings.

- Natural language processing (NLP) is

the ability of computers to analyze, understand and generate human language, including speech. The next stage of NLP is natural language interaction, which allows humans to communicate with computers using normal, everyday language to perform tasks.³

A number of science fictions have been made that imagined the world being populated with robots that would do everything for human beings. With advances in AI, the once imagined scenario can turn into reality in the future. Numerous software, machines, etc. are created using AI to make our lives easier in many ways, but the question that arises is who can claim ownership over content created by a machine?

Devoid of any doubt, this is one of the most complex matter. Traditionally, the ownership of copyright in computer-generated works was not in question as the program was simply a tool that supported the creative process, just like a pen and paper. However, today, the computer program is no longer a tool; it actually makes many of the decisions involved in the creative process without human intervention. Artificial intelligence is already being used to generate works in music, journalism, and gaming. These works could, in theory, be deemed free of copyright because they are not created by a human author. As such, they could be freely used and reused by anyone. That would be very bad news for the companies selling the works. There are two ways in which copyright



law can deal with works where human interaction is minimal or non-existent.

- It can either deny copyright protection for works that have been generated by a computer

or

- it can attribute authorship of such works to the creator of the program.

Feist Publications v Rural Telephone Service Company, Inc. 499 U.S. 340 (1991) which specifies that copyright law only protects “the fruits of intellectual labor” that “are founded in the creative powers of the mind.” Similarly, in a

recent Australian case *Acohs Pty Ltd v Ucorp Pty Ltd*, the court declared that work generated with the intervention of a computer could not be protected by copyright because it was not produced by a human. In Europe, the Court of Justice of the European Union (CJEU) has also declared on various occasions, particularly in its landmark *Infopaq* decision (C-5/08 *Infopaq International A/S v Danske Dagbaldes Forening*) that copyright only applies to original works, and that originality must reflect the “author’s own intellectual creation.”⁴⁴

The legal system varies across borders. The USA and Germany have in the past

made rulings that only those things that have been created by humans can be created and protected by copyright. However, the law in the UK is different.

In Europe the Court of Justice of the European Union (CJEU) has also declared on various occasions, particularly in its landmark *Infopaq* decision (C-5/08 *Infopaq International A/S v Danske Dagbaldes Forening*), that copyright only applies to original works, and that originality must reflect the “author’s own intellectual creation.” This is usually understood as meaning that an original work must reflect the author’s personality, which clearly means that a

⁴⁴<https://courses.cs.washington.edu/courses/csep590/06au/projects/history-ai.pdf>, <https://www.lexology.com/library/detail.aspx?q=ab3340fa-57c5-4145-afe9-110b088c9e36>, https://www.sas.com/en_in/insights/analytics/what-is-artificial-intelligence.html,

⁴⁵http://www.wipo.int/wipo_magazine/en/2017/05/article_0003.html, <https://indiankanoon.org/doc/1990275/>

human author is necessary for a copyrighted work to exist.⁵

In countries like Hong Kong (SAR), India, Ireland, New Zealand and the UK, the authorship is given to the programmer. This approach is best encapsulated in UK copyright law, section 9(3) of the Copyright, Designs, and Patents Act (CDPA), which states:

"In the case of a literary, dramatic, musical or artistic work which is computer-generated, the author shall be taken to be the person by whom the arrangements necessary for the creation of the work are undertaken."⁶

Furthermore, section 178 of the CDPA defines a computer-generated work as one that "is generated by computer in circumstances such that there is no human author of the work". The reason behind such provision is to create an exception to all human authorship requirements by identifying the work that goes into creating a program capable of generating works, albeit the creative glint is performed by a machine.

POSITION IN INDIA

Section 2(d) of the Copyright Act, 1957, defines the term "author". According to this section, the term "author" means -

- i. in relation to a literary or dramatic work, the author of the work;
- ii. in relation to a musical work, the composer;
- iii. in relation to an artistic work other than a photograph, the artist;
- iv. in relation to a photograph, the person taking the photograph;
- v. in relation to a cinematograph film or sound recording, the producer; and
- vi. in relation to any literary, dramatic, musical or artistic work which is computer-

generated, the person who causes the work to be created;

As per this section, copyright authorship is not vested on the artificial person and only a natural person can be protected as an author under the Act.

Furthermore, in the case of *Amarnath Sehgal Vs. Union of India*⁷, Hon'ble Justice P Nandrajog recognized the moral rights of an author. He observed that "a creative individual is uniquely invested with the power and mystique of original genius, creating a privileged relationship between a creative author and his work." In this case, the Court emphasized the author's moral rights and suggested that artificial persons should be excluded from the ambit of authorship.

ARTIFICIAL INTELLIGENCE, COPYRIGHT, AND THE CONFUSION

Despite the advancement in the field of artificial intelligence, the ambiguity and debates on copyrightability of machine intelligence still continue. Many are in favor that creators of AI robots are entitled to get the copyright as it is the intellectual labor expended by its creator. However, it has been witnessed that there is no law that protects an artificial person. And, there is no doubt that Artificial Intelligence is considered as an artificial person and hence, cannot be protected under copyright law. There are some case laws which indicate that this ambiguity can only be solved on a case-to-case basis. However, if we look into the future, with the advancement of artificial intelligence, things are likely to become more complex, blurring the difference between artwork made by a human being and by a computer. However, granting copyright to the person who has made the machine using AI is perhaps the most reasonable approach as it will ensure that companies keep investing in the technology and that they will get a return on their investment.⁸



Raei is currently working as an Associate Trademarks with Singh and Singh Law Firm as an associate and has worked with various eminent IP law firms in the past. Her Practice areas include trademark prosecution and Oppositions, Copyright Prosecution. She has a keen interest in Sports law and Cyberlaw.