A.I. AT THE CROSSROADS: COPYRIGHT, AUTHORSHIP, AND LEGAL PERSPECTIVE IN MACHINE GENERATED CONTENTS

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ABSTRACT

The evolution of copyright protection, starting from the 16th-century printing press, faces contemporary challenges in the 21st century due to technological advancements. Copyright rights and enforcement have encountered new complexities grounded in the legislative enactments. This paper contends that the Work produced by Artificial Intelligence (A.I.) is inherently original and warrants copyright protection. A. Technology has become a formidable force, facilitating the generation of novel authorship across diverse fields such as science, medicine, law, art, and literature—the escalating volume of A.I. The content I generated explores why such Work merits copyright protection and how this intersects with ownership issues. The expanding influence of Artificial Intelligence across diverse sectors such as medical science, transportation, aviation, space, education, entertainment (music, art, games, and films), and industry has profoundly reshaped our daily lives. This transformation extends to the realm of Intellectual Property Rights (I.P.R.s). The global recognition of A.I.'s role in fostering creativity and innovation is evident, with a particular emphasis on its impact on copyright, patents, designs, and trade secrets among various I.P.R.s.

The paper conducts a comparative analysis of existing copyright laws across jurisdictions, addressing the pressing question of A. I generated the Work's rightful place within the copyright framework. It delves into current challenges in digital copyright and anticipates future developments. A focal point of discussion is the concept of legal personhood and its connection to the ownership of copyrightable Work. A.I. has created significant concerns and challenges in intellectual property rights, particularly within copyright law. This article explores the pivotal role of A.I. in generating creative works, encompassing various forms such as arts, music, poetry, novels, and more. The focus extends to examining issues related to authorship and the emergence of "deep fakes" resulting from A.I.'s autonomous creation of works.

INTRODUCTION

While referring to the Indian Copyright Act of 1957 or the Patents Act of 1970, the roots of much Indian legislation can be traced back to the British colonial administration. At that time, technology was less advanced than it is today. Machines were employed to assist individuals in their tasks, but the landscape has undergone a profound transformation with the widespread adoption of Artificial Intelligence (A.I.) in our daily lives. The current technological reality is marked by the pervasive influence of AI, exemplified by applications like Prisma and Google Deep Dreams, utilizing robust neural networks to produce intricate designs.[1] The concept of conferring copyright or other intellectual property rights upon human beings aligns with the traditional approach reflected in current laws. However, as our world evolves, non-human entities are generating original works, complicating the notions of 'authorship' and 'copyright ownership.' Illustratively, the well-known 'Monkey Selfie' case[2] exemplifies this complexity, where a monkey unintentionally took a selfie with a photographer's camera, prompting PETA to advocate for the monkey's selfie copyright in Court. Despite an out-of-court settlement in the mentioned case, the Court's potential ruling on the matter remains unresolved.

A.I. exhibits the capability to engage in various creative endeavours, including composing music, crafting blogs, novels, poetry, and generating paintings and drawings. It is crucial, however, to discern between works created by individuals with the assistance of A.I. and those generated entirely by A.I. without human intervention. The intersection of A.I. and intellectual property law introduces new complexities and considerations, necessitating a nuanced understanding of the distinctions between human-driven and AI-driven creative outputs. In the contemporary era, Artificial Intelligence (A.I.) has garnered significant importance, becoming an indispensable element in numerous technological applications. Its widespread integration has brought about transformative changes across various sectors, including health, transportation, aviation, space, education, and the entertainment industry (music, art, games, films).

[1] Olga Fesenko, Intellectual Property Rights in Artificial Intelligence, UNIVERSITY OF TARTU, SCHOOL OF LAW DEPARTMENT, (2017), https://oigus.ut.ee/sites/default/files/oi/o._fesenko_d._kovaevi_it_law_lab_intellectual_property_rights_in_artificial_intelligence.pdf.

[2] Naruto v. Slater, 2016 U.S. Dist. Lexis 11041

ARTIFICIAL INTELLIGENCE

Artificial Intelligence is the simulation of human intelligence in machines programmed to think and learn like humans. The word "Artificial Intelligence" was first coined by John McCarthy in 1956.[3] These systems are mainly designed to perform various tasks which require human intelligence such as visual perception, decision-making, language translation, speech recognition. A. I encompasses a wide range of technologies and approaches which includes machine learning, natural language processing, computer vision, etc. Based on the degree of human involvement, WIPO in its session on "WIPO Conversation on Intellectual Property and Artificial Intelligence", categorized works created using A.I. as "AI-generated works" (where the output is generated without human intervention) and "AI-assisted works" (where the output is generated with material human intervention and/ or direction). Since copyright law globally recognizes authorship and protection for works conceived and created by humans, the advent of AI-generated and AI-assisted works has created a new set of challenges and uncertainties in this area.

ARTIFICIAL INTELLIGENCE AND COPYRIGHT

Ray Kurzweil[4] A.I. was famously defined as "the science of making computers perform tasks that typically require human intelligence." While it has been widely accepted that machines can excel at mathematical and scientific activities, creativity was traditionally considered a uniquely human trait. However, three decades after Kurzweil's concept, computers now generate various original works, spanning visual, literary, and musical domains. Over the past decade, artificial intelligence systems have experienced a rapid surge in this highly tech-savvy world, utilizing advanced technologies to create ingenious and intelligent systems. Consequently, the day may not be far when these sophisticated bots will independently produce remarkable and innovative inventions without relying on human intelligence.

The first copyright legislation can be traced all the way back to the Statute of Anne, which was legislated in 1710. The Statute of Anne was the first legislative enactment in Great Britain, giving legal protection to the publisher for a certain period of time.

[3] Freddy Sánchez Merino, "Artificial Intelligence and a New Cornerstone for Authorship," WIPO-WTO Colloquium Papers, 2018, p. 28.
[4] RAY KURZWEIL, THE AGE OF INTELLIGENT MACHINES (M.I.T. Press 1990)

Various legislative amendments led to the Copyright Act of 1911 in the U.K., which formed the basis of the first Canadian Copyright Act of 1924[5].

Since the 1970s, computer programs have been extensively utilized in generating copyrighted works. Initially, these computer-generated works posed minimal challenges in terms of copyright ownership. The prevailing notion was that computer programs functioned as tools, supporting creative activities that necessitated human intervention for work production. They were akin to stationary items that humans utilized to create works. However, the landscape has undergone a significant transformation. The advent of Artificial Intelligence (A.I.) has elevated computer programs beyond mere tools. Now, these programs possess the capability to independently generate works by making autonomous decisions, marking a substantial departure from their earlier role as simple tools.

Historically, copyright protection has been associated with scenarios where technology served as a medium to aid individuals in their tasks, such as using a camera to capture a photograph. In such cases, the individual was acknowledged as the creative force defining or creating the scenario, ultimately producing the initial script. However, with recent advancements in machine learning and the increased capabilities of computer resources, A.I. can now autonomously generate works that are unquestionably independent of human imagination. The 1884 Supreme Court case of Burrow-Giles Lithographic Co. v. Sarony[6] first extended copyright protection to photography. The camera used to capture the image of writer Oscar Wilde by photographer Napoleon Sarony was considered by the Court as a tool which aided the "author" in creating “an original work of art.” Much has changed in the world of photography since the days of Sarony. Most cameras used today are entirely digital and possess both a computer processor and software, which makes photography a virtually automatic process. The 1884 Supreme Court ruling, however, is still used as a legal precedent justifying the issuance of copyright to millions of photographs taken each day.

The fundamental aspect of identifying the nature of the object is to ascertain whether the object generated by artificial intelligence qualifies as a work within the scope of Copyright Law. A work, as defined in copyright law, is the subject of protection, representing an intellectual accomplishment characterized by originality and expressible in a specific form.

[5] Harris L E. Canadian Copyright Law, 4th ed. Hoboken, New Jersey: John Wiley & Sons Inc.; 2014
[6] C.F. Burrow-Giles Lithographic Co. v. Sarony, 111 U.S. 53 (1884).

For a work to qualify for copyright protection, it must meet the criterion of originality, showcasing the author's skill, judgment, and creativity. The issue arises in the context of AI-generated works, sparking debate on whether A.I. can genuinely exhibit originality given its reliance on pre-existing data and algorithms designed by humans. A prime example is Chat G.P.T., which utilizes extensive datasets, including copyrighted material, for algorithm training. Additionally, Google has developed software capable of generating original music based on descriptions and recordings. The capabilities of A.I. to replicate and imitate copyrighted works introduce complexities, blurring the distinction between original and AI-generated content, resulting in legal ambiguities. While A.I. can arrange and compile data in distinctive ways, determining if it possesses the requisite creativity for meeting the threshold of originality remains a challenging aspect. This gives rise to concerns regarding potential copyright law infringements. It is noteworthy that the copyright laws of many countries also provide moral rights to the author, though this is not an obligation under the TRIPs Agreement.[7] Two moral rights – (i) right of paternity and (ii) right of integrity are ordinarily provided to the author. The former ensures the right of the author to be associated with their Work and be named as its creator. In contrast, the latter enables the author to claim damages for any mutilation or distortion of the Work if that is prejudicial to their honor or reputation. So the answers to questions like who's the author, who's the owner, whether it is A. I generated or whether it is A.I assisted, all varies according to different jurisdictions.

THE UNITED KINGDOM

The U.K. Copyright, Designs, and Patents Act, 1988 (CDPA) deals with computer-generated works. The term "computer-generated" Work is specifically defined in the CDPA as Work that is produced by a computer under circumstances where there is no human author involved in the creation of the Work. This provision is established to carve out an exception to the usual requirement of human authorship. The objective is to ensure proper acknowledgment and protection for the effort invested in developing a program with the capacity to autonomously generate Work. Section 9(3) of the U.K. Copyright, Designs and Patents Act, 1988[8], specifies that for computer-generated literary, dramatic, musical, or artistic works, the author is considered to be the person who undertakes the necessary arrangements for the Work's creation. Additionally, Section 178[9] defines "computer-generated" concerning a work, stating that it is

[7] Trade Related Aspect of Intellectual Property Rights, art. 9.
[8] The Copyright, Designs and Patents Act, 1988; S 9 (3)
[9] The Copyright, Designs and Patents Act, 1988; S.178

generated by a computer in circumstances where there is no human author involved. The main two issues that are debated in the U.K. are, firstly, the emergence of AI-generated works is a recent phenomenon, and critics argue that the law did not anticipate this when using the term "computer-generated." Secondly, there is a perceived contradiction in the U.K. law, which, while recognizing computer-generated works, simultaneously insists on originality in literary, dramatic, musical, or artistic works, a quality some argue is lacking in "computer-generated" works.

Section 9(3) of the CDPA may be given a different interpretation, as suggested by Sik Cheng Peng in his study. He argues that when a user takes part in selecting data that is to be fed to the A.I. system, then the user should be considered the person who initiated the process to create the Work. The user therefore should be taken as the person who made the "necessary arrangements" to create the Work and not the A.I. or the programmer or the company owning the A.I. Consequently, the user should be assumed to be the author of the AI-generated Work as opposed to A.I. or the programmer.[10]

INDIA

The Indian Copyright Act, 1957 does not define computer generated works. Under section 2(d)(iv), an author is defined that is, in relation to “any literary, dramatic, musical or artistic work which is computer-generated” as “the person who causes the work to be created”[11].The meaning of the term "author" was elaborated by the Court in Camlin Pvt. Ltd. v. National Pencil Industries[12]. The Courts stated that "mechanically reproduced printed carton" was not a subject matter of copyright for the reason that it was not possible to determine who the author of such carton was. The Court further stated that "copyright is conferred only upon authors or those who are natural person from whom the Work has originated. In the circumstances, the plaintiff cannot claim any copyright in any carton that has been mechanically reproduced by a printing process as the Work cannot be said to have originated from the author. A machine cannot be an author of an artistic work, nor can it have a copyright therein”.

In 2020, the Indian Copyright Office made a notable decision by acknowledging an A.I. tool named "Raghav" as a joint author alongside its human developer for a specific artwork, and

[10] Sik Cheng Peng, “Artificial Intelligence and Copyright: The Author’s Conundrum”, WIPO-WTO Colloquium Papers, 181 (2018)
[11] The Copyright Act, 1957, s.2 (d) (vi)
[12] A.I.R. 1986 Delhi 444

subsequently, the office granted registration for this collaboration. However, a notice was later issued by the Copyright Office, retracting the granted registration. The reason cited was that the responsibility fell on the co-author and human developer to inform the Copyright Office about the legal standing of Raghav. This development seems to stem from the realization by the Copyright Office that the existing Indian statute lacks provisions for non-human authors to hold copyright.

In the case of "Amar Nath Seghal v. Union of India[13], the Delhi High Court remarked that while laws in the material world are designed to safeguard the right to fair compensation, life extends beyond mere material considerations. It is temporal and often tied to spiritual beliefs, such as the existence of the soul. The Court emphasized that moral rights, which pertain to the feelings and emotions of the human author, can be seen as the soul of their works. The author holds the right to preserve, protect, and nurture their creations through these moral rights. Importantly, moral rights are not intended for artificial intelligence (A.I.).

UNITED STATES

In the United States also, the author of a work which is created with the help of A.I. may have copyright if he/she establishes that the A.I. program was used as a tool/medium in the creation of the Work.[14] The United States maintains the position that copyright protection is applicable only to works that are inherently original. In order for a work to be considered original, it must involve independent creation and demonstrate a certain level of creativity, representing the intellectual labor rooted in the creative capacities of the human mind. Additionally, Chapter 300 of the Compendium of U.S. Copyright Office Practices, specifically titled "Copyrightable Authorship: What Can Be Registered," explicitly outlines in section 306, referred to as 'The Human Authorship Requirement,' that the U.S. Copyright Office will register an original work of authorship if it was created by a human being. Furthermore, section 313.2, addressing 'Works That Lack Human Authorship,' asserts that for a work to qualify as a work of "authorship," it must be brought into existence by a human being. The computer programs responsible for autonomously generating works are the result of human ingenuity; their source code may be copyrighted as a literary work under the U.S. Copyright Act.[15] The artworks generated by such

[13] 2005 (30) PTC 253 (Del)
[14] Kalin Hristov, "Artificial Intelligence and the Copyright Dilemma", 57(3) IDEA 435 (2017)
[15] Computer Software Copyright Act, L. No. 96-517, § 117, 94 Stat. 3028 (1980) (codified at 17 U.S.C. § 117 (1988)

programs, however, are not copyrightable if not directly influenced by human authors.[16] One example given by the U.S. Copyright Office is a "weaving process that randomly produces irregular shapes in the fabric without any discernible pattern."

Since chance, rather than this "weaving machine" programmer, is directly responsible for its Work, the resulting patterns would not be protected by U.S. copyright. Randomness, like autonomously learned behavior, cannot be attributed to the human programmer of an A.I. machine. In 1984, Sony Corp. of Am. v. Universal Studios, Inc.[17], the Supreme Court determined that the restricted benefits linked to copyright ownership are designed to inspire the creative efforts of authors and inventors. This provision aims to provide a distinct reward, encouraging creative activities. Subsequently, it grants the public access to the outcomes of their ingenuity once the finite period of exclusive control has concluded. Copyrighted works act as a stimulant for creativity and contribute to expanding the repertoire of works accessible to the public domain once their copyright protection expires.

CONCLUSION

For over two centuries, the question of who should be credited as the author of creative works has been a significant point of contention. In the past, attributing authorship was relatively straightforward since most tools facilitating the creation of copyrighted works, like cameras and computers, were merely instruments, and humans were the primary creators. However, the landscape has changed dramatically due to the rapid advancement of A.I. and modern machine learning methods, allowing A.I. systems to autonomously produce an increasing amount of Work. As computational capabilities advance, the distinction between works created by humans and those generated by machines is diminishing rapidly. Consequently, it becomes imperative for us to determine the appropriate level of protection for works created by A.I. with minimal or no human intervention. The progress of AI technology brings about challenges in intellectual property law, necessitating updates and clarifications to existing frameworks like copyright laws to adequately govern AI-generated creations in the digital age. Resolving issues regarding originality, authorship, and collaborative efforts involving AI demands thoughtful legal adjustments. Moreover, addressing challenges concerning database and patent protection in the

[16] The U.S. Copyright Act does not directly address the matter of works independently created by computer programs, thus leaving the subject open to interpretation by the courts, scholars, and the U.S. Copyright Office. For more information on autonomously machine-generated works, see U.S. COPYRIGHT OFFICE, COMPENDIUM OF U.S. COPYRIGHT OFFICE PRACTICES § 313.2 (3rd ed. 2014).
[17] Sony Corp. of Am. v. Universal City Studios, Inc., 464 U.S. 417, 429 (1984)

AI domain is essential for ensuring comprehensive intellectual property safeguarding amidst technological advancements. Thus, legal adaptation and clarification are imperative for effectively managing the complex interaction between AI and intellectual property law.