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THE AUTHORSHIP DILEMMA: DETERMINING OWNERSHIP OF AI-GENERATED CONTENT UNDER INDIAN COPYRIGHT LAW

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Abstract

With the emergence of artificial intelligence technologies which have the capacity to create literary, artistic, musical and any other creative work, copyright law made under the assumption of human authorship is now in disarray. The present study attempts to examine the problem of authorship under copyright law in India with reference to the creative works created entirely or mainly through artificial intelligence technologies. The paper examines how the computer generated works are legally dealt with under Section 2(d)(vi) of the Copyright Act, 1957 and analyses this provision within the context of the principle of originality defined comprehensively by Indian judiciary. The study conducts the comparative analysis of the views of UK, US and European Union on the problem of authorship of computer generated works in order to develop the doctrinal framework which may help to reform the existing position in India.

Keywords: *artificial intelligence, copyright, authorship, computer-generated works, Copyright Act 1957, originality, India.*

I. INTRODUCTION

The emergence of AI technologies which can produce extremely complex works of literature, art and music has brought into question one fundamental tenet of copyright law, which involves the concept of authorship that emerges from human intelligence.²

Systems that can create essays, works of art, musical pieces, and computer programs based on short, natural language inputs are readily available, and the amount of material created using some degree of computer involvement is increasing at such a rate that current copyright laws have not been constructed to address.³ The issue that emerges out of this situation is the one

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² See Jane C. Ginsburg & Luke Ali Budiardjo, Authors and Machines, 34 Berkeley Tech. L.J. 343, 346 (2019).

³ Shlomit Yanisky-Ravid, Generating Rembrandt: Artificial Intelligence, Copyright, and Accountability in the 3A

which needs immediate attention and has remained unattended to a considerable extent in Indian law – whether there can be anyone at all who can claim the copyright of a work produced through an artificial intelligence system.

The Indian Copyright Act, 1957 was extensively amended in 1994 to determine the concept of authorship in relation to computer-generated works.⁴ Section 2(d)(vi) of the Act provides that "the author of any literary, dramatic, musical or artistic work which is computer generated shall be the person who causes the work to be created." This section, while appearing to support machine-assisted creation of works, was primarily formulated in light of rule-based and template-based software creations and its relevance to modern-day generation of works through statistical models trained on huge data sets by generative systems cannot be denied.

This document follows with six additional sections. First, the document discusses the conceptual basis of authorship in the Indian copyright law regime and the way in which the judiciary has interpreted the notion of originality. The document then considers the legal regime surrounding computer-generated works and the experience of the Indian Copyright Office with the case of an AI work in the RAGHAV case. Further, the document conducts a comparative analysis of the UK, the USA, and the EU followed by a discussion of doctrinal hurdles in adapting the present legal regime in India to contemporary generative systems, culminating in recommendations for legislative change.

II. AUTHORSHIP AND ORIGINALITY UNDER INDIAN COPYRIGHT LAW

Copyright protection under the Berne Convention and Indian Copyright Act of 1957 is premised on the presence of a work that is original and creative. The definition of 'author' has not been defined under the Indian Copyright Act, but the term is used under Section 2(d), which defines the author of a literary or dramatic work as its creator, the author of a musical work as its composer, and the author of an artistic work as its artist, except for photographs.⁵

Notwithstanding, the doctrine of uniqueness has never been stated by law; rather, it has been widely interpreted by judges through various court cases. The Indian Supreme Court ruling in *Eastern Book Company* found that the minimal element of effort and toil of the "sweat of the brow" rule of England, as well as the rule of creativity in the United States, was

Era, 2017 Mich. St. L. Rev. 659, 663-667.

⁴ Copyright Act, No. 14 of 1957, § 2(d)(vi) (India), inserted by the Copyright (Amendment) Act, No. 38 of 1994.

⁵ Copyright Act, No. 14 of 1957, § 2(d)(i)-(iii) (India).

unsatisfactory.⁶ For this particular standard, the creator needs to exercise his/her own original creation skills and is not supposed to just reproduce the work which already falls into the public domain but is much less demanding on originality than the creativity standard in the US.

The problem with applying this standard to the artificial intelligence generated works is mostly definitional and not numerical. The evaluation by Eastern Book Company implies the presence of original skill and discernment of an author and this concept becomes comprehensible only when applied to a person who is able to make deliberate judgment-based decisions.⁷ When an innovative result emerges from the process carried out by the statistical model, and such result stems from the patterns detected in a dataset used for training, it is far from clear whether what was generated by the statistical model can be seen as reflecting the type of insight that originality aims to reward.

This rationale for the originality requirement is closely tied to the utilitarian reasoning often advanced in defense of copyright in common law countries, specifically the incentive to create new works which otherwise would not be created.⁸ In cases where the work is created independently by an artificial intelligence with minimal human intervention, the need for the provision of incentives becomes much less because the machine does not require any form of motivation by law to create any work.

III. THE STATUTORY TREATMENT OF COMPUTER -GENERATED WORKS

According to Section 2(d)(vi) of the Copyright Act, 1957, the person responsible for generating a literary, dramatic, musical, or artistic work using a computer shall be considered as the creator of that particular work. The section was highly inspired by Section 9(3) of the Copyright, Designs, and Patents Act of 1988 in the UK, which sought to solve the issue of lack of an author due to a computer program generating an original work with no clear human author.

The phrase "individual responsible for the creation of the work," however, is open-ended in a way that poses serious challenges where it is linked with generative artificial intelligence. For instance, in cases where there were computer-generated works in the earlier days, such as procedurally generated graphics or document templates, the relationship between the

⁶ Eastern Book Co. v. D.B. Modak, (2008) 1 SCC 1 (India).

⁷ See Arul George Scaria, Copyright and Artificial Intelligence: Emerging Challenges for Indian Law, 12 NUJS L. Rev. 1, 8-11 (2019).

⁸ William Fisher, Theories of Intellectual Property, in New Essays in the Legal and Political Theory of Property 168, 169-172 (Stephen Munzer ed., 2001).

instructions of the human being and the output of the machine was easily established.⁹ The current generative models, on the other hand, are designed using large sets of data, they work through complicated neural structures whose decision-making process is largely unknown even to their creators, and they often provide outputs based on hints that provide only a rough idea of what is expected creatively.

There is then an issue of who the creator of the output is supposed to be – the person initiating the task, the developer creating and training the model, or both. No other clarification of this division can be found in the statute, and the Indian courts have yet to have the opportunity to interpret the law in the context of generative artificial intelligence.¹⁰

IV. THE RAGHAV APPLICATION: INDIA'S FIRST ENCOUNTER WITH AI AUTHORSHIP

India's first encounter with the problem of AI authorship came in 2020, when a person sought copyright registration for a work of art known as "Suryast" which had been created using an AI software called "RAGHAV" and registered the AI as a co-author along with the human creator. Copyright registration was given to RAGHAV as the co-author, and this led to substantial debate among scholars since Indian law did not recognize any non-human entity as a legal person.¹¹ The Office also issued a notice of withdrawal on the grounds that an artificial intelligence tool cannot be recognized as an author or co-author as per the Act and asked the candidate to choose between removing the artificial intelligence tool from the list of authors or explaining the legal status of the same.

The case of RAGHAV is, although not examined in court, a valuable case for several important reasons. First, it shows how the Copyright Office has found it difficult to apply section 2(d)(vi) consistently for those works that have been greatly influenced by artificial intelligence tools. Secondly, it proves that candidates could possibly find themselves with the incentive to improve the creativity of the artificial intelligence tool, either unintentionally or intentionally.¹²

⁹ Pamela Samuelson, Allocating Ownership Rights in Computer-Generated Works, 47 U. Pitt. L. Rev. 1185, 1199-1204 (1986).

¹⁰ Annemarie Bridy, Coding Creativity: Copyright and the Artificially Intelligent Author, 2012 Stan. Tech. L. Rev. 5, 22-27.

¹¹ See Amlan Mohanty, India's Copyright Office Registers AI as Co-Author, Then Reverses Course, 43 Colum. J.L. & Arts 271, 275-279 (2020).

¹² Arul George Scaria, Copyright and Artificial Intelligence: Emerging Challenges for Indian Law, 12 NUJS L. Rev. 1, 15-19 (2019).

V. COMPARATIVE PERSPECTIVES

A. The United Kingdom

The United Kingdom continues to be one of the few jurisdictions where laws are made with regard to computer-generated works. Under Section 9(3) of the Copyright, Designs and Patents Act, 1988, it is stated that in the case of a computer-generated literary, dramatic, musical, or artistic work, the author shall be defined as the individual who makes the arrangements necessary for bringing about its creation. The definition, which has largely influenced legislation in India, is inadequate in the context of contemporary generative technologies, since the individual who makes the necessary arrangements for creating the work can have very little connection with the specific expression contained in the creation.

A consultation by the United Kingdom Intellectual Property Office with regard to the regulation of computer-generated creations and artificial intelligence concluded that there was no case for completely abolishing Section 9(3).¹³

B. The United States

The United States has taken a much different approach that is stricter by far, one based on the constitutional doctrine that copyright belongs only to works created by an author, a term which according to U.S. Copyright Office interpretations and rulings of federal courts can only mean work done by a human author.¹⁴

This principle was tested in the case of *Thaler v. Perlmutter*, where the creator of an artificial intelligence program tried to register a work created independently by the program, making the program the author of the work and the creator its owner, because of ownership of the program. The decision of the District Court of the United States for the District of Columbia favoured denial of the registration request, since human authorship is required under U.S. law.¹⁵ The Copyright Office has stated that works created solely using generative artificial intelligence in response to a prompt, where no human creative effort is put into expressing those creations, are not eligible for copyright; but works which show enough human involvement in the form of selection, arrangement, or modification of the AI-generated work may be eligible.

¹³ UK Intellectual Property Office, Artificial Intelligence and Intellectual Property: Copyright and Patents, Government Response to Consultation 14-19 (2022).

¹⁴ U.S. Copyright Office, Copyright Registration Guidance: Works Containing Material Generated by Artificial Intelligence, 88 Fed. Reg. 16190, 16192 (Mar. 16, 2023).

¹⁵ *Thaler v. Perlmutter*, 687 F. Supp. 3d 140, 146 (D.D.C. 2023).

C. The European Union

The European Union has no laws that regulate computer generated works at present, while the Court of Justice of the European Union requires certain originality of the work in terms of showing the distinct intellectual creation of the author, understood as making of independent and creative choices by a human being. Although this regulatory framework was not designed to regulate generative AI, according to European experts, this framework excludes machine-generated works from copyright protection unless there is some significant contribution made by a human being¹⁶.

VI. DOCTRINAL CHALLENGES IN APPLYING THE EXISTING FRAMEWORK

A. The Originality Problem

However, the main doctrinal issue concerns the fact of whether the output created by a generative artificial intelligence is able to meet the criteria of originality, having in mind that the Eastern Book Company test emphasizes the importance of the application of individual talent and judgment of the author. Since the system creates the majority of expressive nuances independently from a simple input prompt by the user, it is hard to determine the contribution of human skill and judgment into the end product, while it is easier to assess it with respect to a simple prompt¹⁷.

B. Identifying the Person Who Causes the Work to Be Created

A further problem is connected with implementation of section 2(d)(vi) under circumstances when generative artificial intelligence is used, and there are normally at least three parties involved - the model creator and trainer, the person who makes money off of it, and the person who inputs the data into it. All of these people could be considered equally involved in creation of that work and the Act does not provide any guidance on how to solve their disputes about authorship, so the latter is determined by the terms of services of the platform operator¹⁸.

C. The Problem of Joint Authorship

Another issue which could come into play is that the creation through the process of

¹⁶ Case C-5/08, Infopaq Int'l A/S v. Danske Dagblades Forening, 2009 E.C.R. I-6569, para. 37.

¹⁷ Eastern Book Co. v. D.B. Modak, (2008) 1 SCC 1 (India).

¹⁸ Jane C. Ginsburg & Luke Ali Budiardjo, Authors and Machines, 34 Berkeley Tech. L.J. 343, 389-395 (2019).

iterative interaction of the user with the generator could actually fall under the rubric of a collaborative effort rather than an effort of an individual creator. The rules of joint authorship laid out by the Copyright Act, which apply to collaboration between two or more undifferentiable human authors, did not consider collaboration between a human and a machine¹⁹.

D. Duration and the Absence of a Personality Interest

In conclusion, the period of copyright under Indian law is usually determined by the life span of the creator, which becomes a concept of no rationale whatsoever if the piece is created without any human element at all. Section 22 states an obvious sixty-year term since publication of anonymous or pseudonymous work, and it can easily be applied to the creation of computer, but currently the Act does not state the extension, so how should one define the period?

VII. POLICY CONSIDERATIONS AND PROPOSED APPROACHES

In summary, the period for which copyright will subsist in accordance with Indian laws has been traditionally pegged at the life span of the author, which is entirely irrational in cases where there is no human element in the creation process whatsoever. Section 22 has made the duration of copyright clear for sixty years after publication for both anonymous and pseudonymous works, and an analogous principle may very well be applied to computer-generated works, except that the Act does not define the extension²⁰.

The alternative model assigns ownership to the end-user that provides the prompt and controls the generation process, which is in accordance with Section 2(d)(vi) terminology and user expectations of most generative artificial intelligence tools; but, at the same time, it poses the danger of attribution of authorship to people who have not contributed anything creative.²¹

It does not provide any copyright protection for the products created entirely by the machines since the idea of copyright, which includes recognition of human creativity in return for reward, loses its validity here since there is no human effort invested in creating the product. Nevertheless, while being quite conservative from a doctrinal point of view, this approach is fraught with the danger of causing commercial uncertainty in sectors in which the use of

¹⁹ Ryan Abbott, *The Reasonable Robot: Artificial Intelligence and the Law* 83-89 (2020).

²⁰ Shlomit Yanisky-Ravid, *Generating Rembrandt: Artificial Intelligence, Copyright, and Accountability in the 3A Era*, 2017 Mich. St. L. Rev. 659, 705-711.

²¹ Annemarie Bridy, *Coding Creativity: Copyright and the Artificially Intelligent Author*, 2012 Stan. Tech. L. Rev. 5, 33-38.

generative technologies became common practice when creating the content.

Lastly, the fourth approach, which is preferred by some comparative law scholars, suggests the creation of a *sui generis* right that will be temporary and narrower than copyright, similar to the rights enjoyed by databases in certain legal systems.²²

Another practical issue which comes up through further doctrinal research is whether the liability for infringement exists when generating the output using the generative artificial intelligence system with the copy of protected elements of those works, which are used for training such systems. In fact, as these systems are based on huge amounts of data which consist of materials collected with permission of copyright owners, the risk of derivative infringement is present regardless of the user's ignorance about creating the original work.²³ The issue of authorship stands separate from that of ownership of the resulting work, although it is directly related to it since there can be no fair division of authorship responsibilities without the corresponding mechanism of responsibility for abuse of training data.

VIII. RECOMMENDATIONS

Firstly, it is necessary for the Parliament to make amendments in Section 2(d)(vi) of the Copyright Act, 1957 so as to establish who has authored that work in the perspective of generative AI and whether this definition will include the end-user, the developer, or an equal split of percentage of creativity.

Secondly, it is necessary for the Copyright Office to come up with a registration procedure, similar to that in the United States Copyright Office, to find out the minimum amount of creativity needed from human beings to be termed as human authors.²⁴

Thirdly, the duration of protection of any work classified as computer-generated should be related directly to the period of time within which the work is created or published, similar to how the current system provides for anonymous works under Section 22, instead of being measured from the standpoint of those provisions intended for natural persons.

Firstly, there could be issues concerning the temporary *sui generis* right that would apply exclusively to computer-generated works, and not the copyright regime for human works, in order to give some business protection to the companies making use of the computer-

²² Andres Guadamuz, Do Androids Dream of Electric Copyright? Comparative Analysis of Originality in Artificial Intelligence Attributed Works, 2017 *Intell. Prop. Q.* 169, 191-195.

²³ Daniel J. Gervais, The Machine as Author, 105 *Iowa L. Rev.* 2053, 2081-2087 (2020).

²⁴ U.S. Copyright Office, Copyright Registration Guidance: Works Containing Material Generated by Artificial Intelligence, 88 *Fed. Reg.* 16190, 16193 (Mar. 16, 2023).

generators.²⁵

To begin with, it can be said that any amendment must necessarily include clear disclosure requirements concerning the necessity of an applicant for copyright registration being capable of accurately stating the participation of artificial intelligence in the creation of the respective work in order to prevent the definitional issue of the RAGHAV application case.

IX. CONCLUSION

The problem of authorship that is caused by the use of artificial intelligence for generating content is not only the case of error in the context of copyright law but rather a challenge to the nature of the copyright itself.²⁶

The present paper suggests that despite the sufficient flexibility of Section 2(d)(vi) of the Copyright Act, 1957, it does not address the problems that emerge due to multiple parties' interaction within the context of modern day generative artificial intelligence system. The erratic attitude towards the RAGHAV case on behalf of the Copyright Office is an indicator of practical outcomes caused by continuous legislative neglect of the problem.

With the emergence of new generation Indian creative and technology industries which start to apply the use of generative artificial intelligence in their activities, the lack of proper legal guidelines on authorship and ownership issues can only lead to further confusion within business communities, erratic behavior of the Copyright Office, and possible long-term litigation. A properly crafted legislative solution to the problem, based on similar experience but taking into account specific features of Indian copyright system, still seems to be the most realistic way to go.

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²⁵ Ryan Abbott, *The Reasonable Robot: Artificial Intelligence and the Law* 112-118 (2020).

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