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Gauri Desai

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For more information, please contact: editor.oujipr@ouipr.in

Copyright Protection in the Internet-Era - with special reference to AI

- Gauri Desai¹

Abstract

Every day we see developments in Artificial Intelligence making headlines. With strides being made in AI, giving it the capability to create something new and original, one is left to wonder if its creations are subject to the same copyright laws that we are subjected to. Across the globe, various countries have taken different stances on this, making this one of the most relevant and contemporary topics today. We see AI take over every aspect of lives, it is only natural to want to know more about it. From analyzing what copyright law is, to finding its impact on content created by artificial intelligence, this paper seeks to provide the reader with an insight into the legal domain of AI and copyright in the digital world. It is no surprise that a concept as evolved as AI has made it to the courts, with instances of it claiming copyright over the work it has created or helped create. Examining such real-world examples, helps get a better idea of what exactly is happening in the world of AI and copyright. This intersection, while relatively new, has a lot of scope, making it an interesting topic to delve into.

Key Words: *Copyright, Artificial Intelligence, Internet*

Introduction

The development of AI has had a profound impact on many facets of human existence, including the field of law.² As AI becomes increasingly capable of producing information that is almost indistinguishable from human-created material, the notion of authorship in copyrighted works is an area of great concern.³ Likewise, the development of intellectual property laws, in particular copyright law, has historically been centred on human beings who, through their creative processes, produce autonomous, original works. The development of AI systems, however, adds a fresh perspective to this environment. These

¹ Intern at DPIIT, IPR-Chair, Osmania University; Student (B.A.LL.B., 5th year), Symbiosis Law School, Hyderabad; email: gauriidesai@gmail.com

² Mani VS, Nanda G and Narula GS, 'Impact of US Copyright Office Guidelines on AI-Generated Work' <<https://www.sconline.com/blog/post/2023/04/15/impact-of-us-copyright-office-guidelines-on-ai-generated-work/>> accessed 20 June 2023.

³ *Ibid.*

cutting-edge machines are able to independently produce artistic works without a direct human input. This begs the urgent question: In such circumstances, who should be granted ownership rights?⁴

The intersection of AI systems, creativity, and the arts is not some far-off reality anymore; rather, it is a contemporary reality with enormous business ramifications. Around the world, AI is being used to create a variety of creative works, including music, journalism, art, and literature.⁵ As a result, in the digital age, a significant legal difficulty arises identifying copyright ownership when AI systems independently produce creative works, independent of human authors. Additionally, this issue goes beyond ownership to include licensing rights, royalties, and the duty to defend copyrights against infringement by people or other entities. Identification and assignment of the proper rights and obligations to the pertinent parties concerned become vital. Should various stakeholders be acknowledged, or should one company have exclusive rights?

To address these issues, it is necessary to reevaluate current intellectual property regulations in order to make them compatible with the distinctive features of AI-generated works. In cases where the creative process is completely controlled by AI systems, the legal framework must offer precise instructions on ownership, licensing, and obligations. Take the US for example. US courts have historically denied non-human entities the power to claim authorship over works protected by copyright and regarded human writers as the only ones who created them. Clarity on the scope of copyright protection for works using AI-generated elements is necessary, since AI is increasingly being incorporated into creative processes.⁶

The U.S. Copyright Office (USCO), in a recent statement of policy published on March 16, 2023, indicated that works including AI-generated content may be eligible for copyright protection, provided there

⁴ Soaham Bajpai, 'Artificial Intelligence and Its Creation: Who Owns Intellectual Property Rights?' (2020) 10 GNLU JL Dev & Pol 152.

⁵ *Ibid.*

⁶ Mani et. al. (n 2).

is enough human authorship involved. The policy describes the USCO's procedure for identifying the authors of such publications. The USCO will determine whether or not the AI's contribution goes beyond mechanical replication and includes original idea and design. This decision will be made on a case-by-case analysis.⁷

The USCO offered examples to demonstrate their plan of action. The conventional elements of authorship would be credited to the machine if an AI system simply follows instructions from an individual and produces a complicated work as a result. In these circumstances, the work would not qualify for copyright protection since it is not completely under human control. However, the final product may be seen as having human authorship if people creatively choose or organize the AI-generated content. Similarly, if people make changes to an AI-generated work that satisfy the requirements for copyright protection, copyright may only be given for the parts that were written by humans.

In light of this regulation, creators who have used AI technology are allowed to assert copyright protection solely for their own input provided for in the final work. When requesting copyright registration, they must distinguish the unique human-authored components from the ones produced by AI and identify and characterize them individually. The USCO underlines that in copyright applications, co-authors should not be included for AI technology or the company that provides it. The USCO's stance on AI-generated content is a key development in the continuing global discussion about whether AI should be acknowledged as creators of copyrighted works. However, the specific level of human input necessary for AI generative works to qualify for copyright protection is not addressed.

In India, the "*person*" who "*causes the creation of computer-generated works*" is the only party entitled to authorship rights under the Copyright Act of 1957. In its 161st Report, "*Review of the Intellectual Property Rights Regime in India*," released on July 23 2021, the Rajya Sabha, which

⁷ *Ibid.*

recognized the limitations of the current Act in accommodating authorship and ownership by AI, recommended a review of the statute. However, the implementation of USCO's policy and how it affects the range of copyright protection for AI-generated works internationally, including in India, are still to be seen.⁸

Artificial Intelligence and IPR

The idea of preserving artistic creations has a long history, going as far back as 500 BC. Rules developed and got more complex throughout time, and several nations finally codified these rules as intellectual property laws through domestic legislation or international treaties. By protecting the authors of such works, these regulations aimed to promote innovations, creative productions, and the expansion of commerce and business. The Statute of Anne, which acknowledged writers as the owners of their copyrights, is credited with giving rise to copyright laws.⁹

Even though artificial intelligence hasn't yet "*invented*" any patented products or techniques, there are several situations in which AI-generated works may be qualified for copyright protection. Examples include the AI-generated Japanese novel "*The Day A Computer Writes a Novel*" and the AI-generated music produced by DeepMind at Alphabet, using systems like WaveNet. It's critical to examine the present position on awarding intellectual property protection to works made by AIs because many AIs are trained to produce content that could be eligible for it.¹⁰ The *Naruto v. Slater*¹¹ case highlighted how American law feels about providing non-human animals with intellectual property protection. According to the court's decision, animals cannot own copyright or file a copyright infringement lawsuit. Human authorship is required by U.S. copyright law, and the U.S. Copyright Office records original works of authorship produced by people. Since most countries' intellectual

⁸ *Ibid.*

⁹ Rajat Rashmi & Shilpi Sneha, 'Artificial Intelligence: IPR, Liability and Ethical Issues' (2018) 11 Int'l In-House Counsel J 1.

¹⁰ *Ibid.*

¹¹ 888 F.3d 418 (9th Cir. 2018).

property laws were created prior to the development of AI, they include similar principles.¹²

A clause of the Copyright, Design, and Patents Act of the United Kingdom states that the person who used a computer to create a copyrightable work is entitled to protection. The Copyright Act of India follows a like strategy. The Indian legislation does not, however, contain any specific definitions or restrictions relating to human influence in AI-generated works. A deeper look at the rules governing trademarks, industrial designs, and patents reveals that only people are allowed to benefit from these protections.¹³

A crucial concern emerges even if the majority of present laws in the world do not support providing copyright or other comparable intellectual property protection to non-human entities, including AIs. If the works produced by artificial intelligence are not covered by intellectual property rights, what would be the motivation for considerable investment in the field? Intellectual property laws are founded on the idea that fresh discoveries and creative works advance society as a whole. In order to advance society, it is crucial to inspire companies and people to innovate and create.

However, it is still unclear who would be the rightful owner of the intellectual property in situations when a corporate body commercializes an AI that was created by a number of writers. Would it be the organization or individual who used the AI to make the work? The solution is perhaps found in the core ideas of intellectual property rights, which state that the human whose “intellect” was used to create a work should be protected since the AI would be viewed as a tool in their hands. The ownership and preservation of such works will need more thought; however, it is currently doubtful that AI will produce something original without any input or direction.¹⁴

¹² Swapnil Tripathi & Chandni Ghatak, ‘Artificial Intelligence and Intellectual Property Law’ (2018) 7 *Christ U LJ* 83.

¹³ *Ibid.*

¹⁴ *Ibid.*

Copyright

Copyright is a crucial part of intellectual property rights since it gives authors of original works legal protection. It covers a variety of creative expression methods, is frequently used to literary and artistic works, gives the creator unique rights in order to help them manage how their work is used and distributed. The assumption that the author is the creator of the work and Locke's economic theory of possessive individualism serve as the foundation for copyright. Two essential conditions must be satisfied for a work to qualify for copyright protection: the work must be original, and it must exist in a tangible form.

The legal basis for copyright protection in India was established by the Copyright Act of 1957 and the accompanying Copyright Rules. It is crucial to remember that copyright does not cover simple notions, information, or ideas. Instead, it preserves how ideas and facts were first expressed. The person who originally created the work, the person who holds rights inherited from the original creator, or an authorized agent working on the creator's behalf can all assert copyright claims.¹⁵

The Copyright Act of 1957 has undergone a number of revisions to better meet modern society's demands and preserve writers' works. The Act's main goal is to stop the unauthorized exploitation of authors and copyright holders works. Among the revisions made, the Copyright (Amendment) Act of 2012 is very important since it intended to bring the Act into compliance with the terms of the 1996 World Copyright Treaty and the 1996 Performance and Phonogram Treaty established by the World Intellectual Property Organization.¹⁶

¹⁵ Onderkova H, 'Copyright Protection in India- Overview and Recent Developments' (*IP Helpdesk*, 2 March 2022) <https://intellectual-property-helpdesk.ec.europa.eu/news-events/news/copyright-protection-india-overview-and-recent-developments-2022-03-02_en> accessed 20 June 2023.

¹⁶ <<https://iarjset.com/wp-content/uploads/2021/07/IARJSET.2021.86105.pdf>> accessed 10 June 2023.

In order to address the problems caused by digitization, the Copyright Amendment Act of 2012 included a number of improvements. It included clauses relating to penalties for infringement, rights to management information, obligations of internet service providers, and the establishment of statutory licenses for cover versions and broadcasting planners. It also broadened scope of copyright protection in the digital sphere. The main objective was to make sure that the writers and owners of the works received an equitable share of the profits.

The amendment also aimed to provide exceptions for specific actions that would not be regarded as copyright infringement. These exclusions, which are listed in Section 52 of the Act, follow the fair use guidelines described in the TRIPS Agreement of 1995 and the Berne Convention of 1885. Authors are given economic rights under the Copyright Act, including the exclusive right to reproduce, distribute, perform, and publicly transmit their works, as well as the ability to turn their works into cinematographic or sound recordings and adapt or translate them. The Act also acknowledges some moral rights for authors. These rights include the ability to claim authorship of the work (paternity right), the ability to safeguard one's reputation in connection with the work (integrity right), and the general ability to stop the work from being falsely claimed. These moral rights continue to exist even after copyright has been transferred to another party.

For example, if a person A, a well-known artist, created a piece of work which was bought by an art gallery, person A retains the moral rights provide for in the 1957 Act. *Firstly*, they hold the paternity right which allows them to associate their name to their work whenever it is displayed or reproduced. *Secondly*, they possess the integrity right which entitles them to defend their artwork against false or defamatory allegations. *Lastly*, they have the right to prevent their work from being falsely attributed. They have the right to safeguard themselves and their reputation as the original creator of the artwork against any false claims made. These rights allow the original creator to retain their creative and artistic identity.

Copyright and AI

It is critical to look at copyright in connection to AI, as it develops and becomes more involved in producing literary works. The relevance and ramifications of copyright in the context of AI-generated material are raised by this point of intersection. Understanding the laws governing copyright is vital as the capacity of AI to produce literary works increases. The investigation into convergence of copyright and AI recognizes the development of AI-generated works and considers how it could affect established copyright standards. It poses crucial questions as to who the author is, who owns the work, and how to assess the originality of works produced by AI systems. It is feasible to investigate the changing connections between creativity, authorship, and technical breakthroughs by looking at copyright in the perspective of AI. This analysis offers insights into the future of copyright law and its adaptation to the shifting environment of AI-generated works, assisting in navigating legal issues and ramifications involved in engagement of AI in literary creations.

Copyright law has always been based on human creators who demonstrate creativity, originality, and independence in their works. But as AI systems develop, the environment is shifting, since these cutting-edge AI may now automatically produce new and innovative works with their own decision-making skills. This poses a crucial question: In situations when the creative process is totally powered by AI, who should be granted ownership rights?¹⁷ AI has the capacity to produce a sizable amount of work quickly and inexpensively. These artificial intelligence-generated works could qualify for copyright protection due to their distinctiveness across many legal systems. The programming and constraints that AI uses throughout the creative process might be deemed to satisfy the criterion of “*skill and judgment*” in producing original creations. However, there is no human author in AI-generated works. In contrast, human interaction is required for AI-assisted creations, allowing the person who used the technology to claim authorship. However, when AI independently generates works without any human interaction, the

¹⁷ Rajat Rashmi (n 9).

question of authorship becomes confusing and has presented difficulties around the globe.¹⁸

Regarding the authorship of AI-generated works, three possible strategies have developed. *Firstly*, some contend that in order to provide AI legal status and related rights, the copyright system should recognize them as creators. *Secondly*, a different viewpoint contends that AI-generated works should not be credited to any one author and should instead be viewed as a part of the public domain that is available to everyone. *Thirdly* is the creation of sui generis rules, which diverge from conventional copyright frameworks and are expressly designed to safeguard AI-generated works. The complexity of AI-generated works is at the centre of this continuing discussion, which calls for thorough examination of related legal, ethical, and practical issues. Regarding authorship in the context of AI-generated works, finding a balance between encouraging innovation and providing fair access to these works continues to be a major concern.¹⁹

Issues with Granting Copyright to AI

Considering AI to be the author of AI-generated works can lead to a number of difficulties and challenges. The possibility for errors in AI-generated works is a serious problem. Inciting violence based on variables like caste, creed, or religion may result from the use of toxic or prejudiced language by AI systems is another real possibility. Due to AI's lack of legal recognition as a person in certain situations, attributing civil and criminal obligation to it becomes challenging. Another issue is when AI-generated works are strikingly similar to already-existing works that are protected by copyright. In these circumstances, how could AI be made accountable for infringement is another issue.

¹⁸ Ahuja VK, 'Artificial Intelligence and Copyright: Issues and Challenges' [2020] ILI Law Review 274 <<https://ili.ac.in/pdf/vka.pdf>> accessed 22 June 2023.

¹⁹ *Ibid.*

Additionally, treating AI as an author presents issues with the transfer of ownership. AI wouldn't be able to transfer ownership of the works it creates without being assigned or having personhood. AI would not be subject to moral rights, which are directly related to the emotions and goals of human authors. Another issue is the length of copyright protection for AI-generated works. AI can create an endless amount of works and is eternal, unlike human authors who have a finite lifespan and become fatigued. It is debatable and ambiguous whether to provide AI-generated works copyright protection. There are also significant challenges associated with the practical elements of AI negotiating royalties and upholding its rights under copyright law. AI lacks the important skills that human authors possess, including the capacity to negotiate and secure proper enforcement of their rights.²⁰

When evaluating the problem of authorship in AI-generated works, one alternative is that these works should not have any designated authors and instead be placed in the public domain. There are various arguments in favor of this viewpoint. *Firstly*, AI has the capacity to produce a significant quantity of work quickly, cheaply, and with little effort. These works are produced by AI at no expense; therefore, it makes sense to make them available to the public without charge. By releasing them into the public domain, anybody can use and enjoy them without any limitations. *Secondly*, AI is capable of producing innumerable versions of a work without using more resources or incurring greater costs.

The conventional idea of authorship, which is frequently connected to the labor, creativity, and investment placed into the creation of a work by a human author, is challenged by this nearly limitless output of AI. AI does not require the economic rights and moral rights given by copyright law since it does not require incentives or rewards. Therefore, putting AI-generated works in the public domain is consistent with AI's nature and traits. However, it is vital to take into account the effects of providing AI-generated works with no protection. Companies that have made large investments in AI systems for producing such works might

²⁰ *Ibid.*

possibly face a serious challenge if these works are made freely available for public usage without permission or the need to pay any fees.

Along with the issues of authorship in AI-generated works, the copyright ramifications of “*deep fakes*” have become a major source of concern. Deep fakes are simulations of people that are made using AI technology and are extremely realistic, down to their voice and appearance. This is an increasing worry for WIPO that includes copyright issues as well as privacy and defamation worries. There are several moral and ethical questions that are raised by the use of AI in deep fake technologies. Privacy issues and potential defamation can result when someone’s likeness is used in a deep fake without their permission and when the actions and remarks shown in the audio-visual work are not authentic. Deep fake audio-visuals of celebrities, such as athletes, artists, and leaders, have the potential to be very popular with the general public and tend to have a very high market value. Even after the people in question have passed away, these deep fakes continue to exist and bring in money for their makers.

What has to be determined is whether copyright laws should even apply to deep fake works created without the consent of the parties concerned. Furthermore, what legal rights do the people portrayed in the image have under copyright laws if permission has been granted? Implementing a fair compensation scheme for both the authors of deep fakes and the people portrayed in the works might be one answer. This strategy tries to address the concerns involved and secure just recompense for all stakeholders. As the usage of AI continues to present new hurdles, it is imperative to find solutions to these complicated problems. WIPO is already working to address these issues and provide the necessary structures and rules. It is crucial to find a balance between promoting innovation and creativity in AI technology and safeguarding the rights and interests of people represented in deep fakes. Society can manage the changing AI landscape and its effects on copyright and related legal areas by tackling these problems.²¹

²¹ *Ibid.*

Ownership of Copyright

The question of who owns the copyright to works produced by AI is complicated and constantly changing. The initial ownership of the copyright is normally held by the author or authors of the work, in accordance with standard copyright rules. However, there isn't a certain agreement on who should be regarded as the "author" of AI-generated works.²² Using photography as an example, one may compare the person who created the AI to the person who makes cameras, and the person who instructs the AI to produce a certain work to the person who uses a camera to take a picture. According to this perspective, the AI user might be considered the original author and owner of the copyright since they give the creative input or guidance that results in the development of the work. On the other hand, the AI's inventor may have a greater claim to some sort of authorship as a result of the creative decisions made during the AI's development and training, similar to how a camera maker may have had some creative involvement during picture capture procedure.

In reality, AI software developers like OpenAI may handle copyright ownership in contractual clauses like their terms of service. By declaring that OpenAI assigns all of its rights, titles, and interests in and to the output to the user, the present Terms of Use of OpenAI appear to transfer any copyright in the AI output to the user. However, it's important to note that earlier iterations of OpenAI's agreements had different clauses, indicating a change in how the company views copyright ownership. The provisions of OpenAI emphasize the attempt to define ownership rights through a contract, thereby moving copyright from the AI provider to the user. However, it should be noted that OpenAI's method is simply one example and that other AI service providers may use alternative tactics to solve copyright ownership. Overall, no clear guideline for identifying the author or authors of such works has evolved due to the lack of legal precedents or particular copyright office rulings

²² Zirpoli CT (Congressional Research Service 2023) <<https://crsreports.congress.gov/product/pdf/LSB/LSB10922>> accessed 20 June 2023.

dealing to AI-created works. In order to establish more complete norms and standards applicable to AI-generated works, more legal and regulatory advancements will probably be necessary to address the issue of copyright ownership in the absence of contractual agreements.²³

Important Cases pertaining to Copyright and AI

Since no discussion in the field of law is complete without case laws, some of the most prominent ones relating to copyright have been discussed below. It must be noted that while a few of these might have been decided upon before the advent of AI, they formulate the basis upon which copyright today, in the world of AI, can be upheld.

Acohs Pty. Ltd. v. Ucorp Pty. Ltd.²⁴

In this Australian case, Acohs claimed copyright on the Material Safety Data Sheets (MSDSs) produced by its employees. The court acknowledged that because Acohs employees chose the contents for their MSDSs, they were original literary works. However, MSDSs written by customers or that were merely just transcriptions, were not regarded as original work. The significance of originality in copyright law is highlighted in this case. The court pointed out that works with a significant amount of creative expression by human authors are given copyright protection. Although important to the development of the software system, the contributions of the software programmers were not regarded as authors of the specific MSDSs. Likewise, the HTML and source codes produced by the computer software were also not regarded as original creations. The case highlights the need for human authorship and makes clear that copyright protection includes original creative works. It draws attention to the differences between the function of software developers and the artistic and creative expression involved in the production of copyrightable works.

²³ *Ibid.*

²⁴ (2012) 201 FCR 173.

Amar Nath Sehgal v. Union of India²⁵

The court determined that even after a work has been sold, the creator maintains moral rights over how it is shown and handled in this case. The court acknowledged that moral rights are part and parcel of an author's creation and cannot be taken away. The government's decision to take down and store the mural without consulting the artist or getting his permission was seen as a breach of his moral rights. The government's claim that it was the rightful owner of the work and could use it anyway it pleased was denied by the court. It stressed how the mural's removal and alteration were damaging to the reputation of the creator. The mural's remnants were given back to artist for restoration and possible sale and the court further awarded him compensation. This historic decision set a precedent for subsequent decisions addressing moral rights and the residual rights of artists by clarifying the significance of moral rights as well as establishing the author's entitlement to the actual work itself.

Authors Guild, Inc. v. Google, Inc.²⁶

In the case of Authors Guild, Inc. v. Google, Inc., the court held that Google's actions of digitizing copyright-protected books, creating a search function, and displaying snippets of those works constituted fair use and did not amount to copyright infringement. The court found that the purpose of Google's copying was highly transformative, as it enabled users to search for and discover information in a new and beneficial way. The display of snippets was limited and did not serve as a substitute for the original works. The court also determined that Google's provision of digitized copies to libraries, under the understanding that they would use them in a manner consistent with copyright law, did not constitute infringement. Additionally, the court ruled that Google was not a contributory infringer. The decision emphasized the importance of fair use in balancing copyright protections with the promotion of innovation and access to information in the digital age.

²⁵ 2005 (30) PTC 253 (Del).

²⁶ 804 F.3d 202 (2d Cir. 2015).

Eastern Book Co v. D.B. Modak²⁷

Eastern Book Company and EBC Publishing, the appellants in this case, released the legal publication “*Supreme Court Cases*” (SCC), which contained copy-edited versions of decisions from the Supreme Court of India. A software known as “*Grand Jurix*” and “*the Laws*” created by defendants Spectrum Business Support Ltd and Regent Datatech Pvt Ltd, was said to have violated the appellants’ exclusive rights by utilizing their copy-edited versions without authorization. The appellants’ claim to exclusive ownership of the content was upheld by the court, who further barred the respondents from utilizing it unedited. By balancing the “*sweat of the brow*” theory with the degree of creativity necessary for copyright protection, the decision established a new benchmark for the concept of originality. It made it clear that derivative works shouldn’t only be copies but should also have some ingenuity in addition to effort and resources. Instead of the degree of literary merit, the main criteria for copyright protection are the use of skill and judgment. This decision emphasized the significance of originality in copyright law by establishing that eligibility for copyright protection required the application of skill and judgment on the part of the author.

Express Newspapers plc v. Liverpool Daily Post & Echo²⁸

In this case, the plaintiffs held a competition in which readers were given cards with five-letter sequences to match to the winning sequences revealed in the Express group papers. The winning sequences were reproduced by The Liverpool Daily Post in their respective newspapers without having bought the winning cards. An injunction against this practice was sought by the plaintiffs in their suit. The defendants claimed that because a computer program created the published sequences rather than a human author, they were not protected by copyright. Justice Whitford decided in favour of the plaintiffs,

²⁷ (2008) 1 SCC 1.

²⁸ [1985] FSR 306.

stating that the computer was only a tool used by a programmer to create the sequences. The court's ruling placed emphasis on the idea that the person using the tool—in this example, the programmer—should be acknowledged as the work's creator. However, regarding the true authorship of computer-generated works, there is still considerable uncertainty. Some contend that the user of the software, not the programmer, should be regarded as the author. This decision is in line with the fundamental tenets of copyright law, which emphasize recognizing human authors based on their creativity rather than the tools by which they produce their works. The ruling emphasizes the need of giving credit to originality when people use expertise and discretion in the creative process.

Naruto v. Slater²⁹

In the *Naruto v. Slater* case, the issue was whether or not Naruto, a crested macaque, could assert copyright ownership on pictures he took with a wildlife photographer's camera. People for the Ethical Treatment of Animals (PETA) maintained that the monkey held the copyright and ought to receive the entirety of the profits from the images on Naruto's behalf. However, the court rejected Naruto's appeal, holding that American law does not grant copyright protection to animals. The court argued that the Copyright Act specifically covers works written by human authors and that copyright legislation is intended to respect human creativity and inventiveness. The ruling emphasized the restrictions on applying copyright to non-human entities and the requirement for legislative action to address prospective copyright extensions to cover artificial intelligence (AI) or animals. Although the decision did not directly address works produced by artificial intelligence, it did raise more general questions concerning the link between AI and copyright.

²⁹ 888 F.3d 418 (9th Cir. 2018).

Conclusion

It is very clear that when dealing with AI and IPR, our legislations are grossly insufficient. In recognition of the complex interdependence between humans and AI, consideration should be given to the unique contributions by both and for these issues to be successfully resolved, international collaboration and legal harmonization are essential. The development of standardized frameworks that address the complexity resulting from AI-generated works depends on cooperative efforts between nation states and organizations, such as the WIPO. While making sure that all key stakeholders are fairly recognized and protected, these frameworks should aim to encourage innovation and creativity.

It is crucial to modify intellectual property rules to account for the distinctive features of AI-generated works as AI develops. In order to create a just and complete legal environment that recognizes the contributions of both humans and AI in the creative process, international coordination, standardized frameworks, and continuous multidisciplinary partnerships are essential. Gaining a greater grasp of the consequences and potential solutions to the problems brought by AI in the field of intellectual property particularly through deliberations between different stakeholders, would encourage the creation of a thorough and just legal framework that takes into account the complexities of AI-generated works in the modern day.

In addition to the ownership question, there are also complicated issues with royalties, licensing, and accountability for copyright infringement. It becomes challenging to determine who should be given license rights and who should be paid royalties for works produced by AI if there are no defined rules. For example, India recently recognized the AI RAGHAV as the co-author, along with a Mr. Ankit Sahni, of a painting titled "*Suryast*", but the same was later withdrawn.

Globally, the effects of AI are already being seen in a number of creative industries, including journalism, music, literature, and visual arts. Determining copyright ownership, however, creates a substantial legal difficulty when the creative work is created independently by automated AI systems, separate from people. Furthermore, it is unclear who is in charge of defending these rights against violations by third parties, whether people or AI. As such, for now or until clearer legislations regarding these issues come up, the best approach to decide on authorship or copyright should be done on case-by-case basis.