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ARTIFICIAL INTELLIGENCE AND THE FUTURE OF COPYRIGHT LAW: EXAMINING AUTHORSHIP, OWNERSHIP, AND LIABILITY

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ABBREVIATIONS

1 AI – Artificial Intelligence

2 GenAI – Generative Artificial Intelligence

3 U.S. CO – U.S. Copyright Office

4 DABUS – Device for the Autonomous Bootstrapping of Unified Sentience

5 TRIPS – Agreement on Trade-Related Aspects of Intellectual Property Rights

6 EU – European Union

7 DPIT – Department for Promotion of Industry and Internal Trade (India)

8 CRCAT – Copyright Royalties Collective for AI Training

9 IPR – Intellectual Property Rights

10 HC – High Court

11 SC – Supreme Court

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ABSTRACT

AI, particularly Generative AI, is transforming the creative sector by automating the generation of content, such as text, images, music, code, and audio-visual material, with minimal human intervention. This development poses significant problems for copyright law, which until now relied on human creativity, originality and intellectual effort. With the growing capabilities of AI systems to create content independently, complex legal challenges emerge about authorship, ownership, liability, and even legal personhood in IP law. The purpose of this study is to investigate whether current copyright mechanisms are suitable for controlling AI-created content. It involves doctrinal and comparative study of law, specifically Indian Copyright Act, 1957 and a comparison of how the United States, the United Kingdom and the European Union approach copyright law. It also addresses some of the more salient cases, including Nova Productions Ltd v Mazooma Games Ltd, Thaler v Perlmutter and Naruto v Slater, not only to remind readers that copyright laws are human-centred, but also to illustrate this principle in practice.

Today's legal frameworks need to evolve to catch up with the rise of AI, the research states. It suggests a legal definition of AI-generated works, licensing regimes for training data, a model for human accountability, and more harmonisation across the world. Finally, the paper calls for a balanced copyright system that provides protection for human creativity while achieving legal clarity for technology usage.

Keywords: *Artificial Intelligence, Generative AI, Copyright Law, Authorship, Ownership, Liability, Intellectual Property, Legal Personhood, AI-generated Works, Human Accountability.*

CHAPTER I

INTRODUCTION

Artificial Intelligence (AI) is one of the most revolutionary technologies of the 21st century. With the emergence of Generative Artificial Intelligence, the creative industry has been revolutionized as AI can create literary works, paintings, music, software code, digital art, photography, and audio-visuals on its own. The speed of this new advancement has posed significant legal hurdles for copyright and IP law.[1] AI systems like ChatGPT, Midjourney, DALL·E, Stable Diffusion and other machine-learning models can generate outputs that

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closely mimic human creativity and intellectual expression. In the traditional understanding of copyright, the rights of human creativity, labour, originality and intellectual effort are protected. Historically, the term "authorship" has suggested a natural person who has the ability to make independent judgment, skill, and creativity.[2] But the emergence of AI-generated works has posed a challenge for the conventional understanding since modern AI tools are able to produce sophisticated works without requiring much or any human intervention. All this presents significant issues from a legal standpoint on the question of who made it, who owns it, who was first, who infringed and who is liable under copyright.[3]

The question of whether AI systems can be regarded as authors is one of the most significant ones. It becomes more complex to determine copyright ownership when a machine creates a poem, a painting, a musical composition or article without any involvement of a human being. Moreover, the issue of who is the programmer, developer, user, the corporation, or whether the content is public domain, infringement, fair use, licensing, and derivative reproduction are all debatable when considering that thousands of copyrighted books, artworks, music, films and online content are used as input for the generation of these AI systems. The Copyright Act, 1957 protects copyright in literary, artistic, musical and dramatic works, etc. in India. The statute predates today's use of sophisticated generative AI systems, and doesn't include any of the issues that might be raised by them, such as who owns an autonomous AI-generated work, who is responsible for making use of an AI-generated work, or the standards that apply to such a training system.[6] The issue of AI-generated works is increasingly becoming the subject of court and policy disputes in recent years, on the international level. As seen in case law, judicial attitudes towards copyright would tend to be pro-human paradigm, and more rigid regarding innovative technology in the future.[7] The study is a critical study where the interrelatedness of Artificial Intelligence and copyright laws are analysed in relation to concept of authorship, ownership, liability and legal accountability. The study investigates whether existing copyright principles and rules are adequate to deal with AI-generated works and suggests changes to be implemented to create a fair and sustainable copyright system for the future.

1.1 *Research Objectives*

The main goals of the study are:

1 To delve into the relationship between AI and copyright.
2 To look into the possibilities of AI in copyright law, including the possibility of AI acting as an author.

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3 To test ownership theories of works of AI.

4 To review liability issues with AI infringement.

5 To study the Indian copyright law and its comparison with the International legal approaches.

1.2. *Research Questions*

The present study uses the following research questions:

1. Whether Artificial Intelligence systems can legally be recognised as authors under copyright law?
2. Who should own the copyright of an AI-generated work?3. Should the AI author or the user own the copyright of the AI work?
3. What is the level of human effort needed to protect copyright of works produced by AI?
4. Should the works that are generated by the AI be deemed public domain if they don't have a lot of human creative input?
5. What are the implications for copyright infringement with AI generated content?

CHAPTER II

CONCEPTUAL BACKGROUND

In the current creative landscape, Artificial Intelligence (AI) has come a long way and is now much more capable than ever before of creating content – whether it be literature, artwork, music, software code, film footage or digital – than were ever created by man. The emergence of new generative artificial intelligence tools (e.g., ChatGPT, Midjourney, DALL·E, Stable Diffusion), has posed a huge challenge to the concept of authorship and authorship rights, as well as to the concept of ownership, originality and liability. The current copyright framework is tailored for the works of human creators and thinkers, but with AI-generated works challenging the requirement of a human creator. Traditional copyright system is intended to safeguard the works of human creators and human thinkers, but AI-generated works raise the question of whether a human creator is necessary.

1. Evolution of Artificial Intelligence

In the past few years, AI has been through a massive change.AI is undergoing a sea change. Today, AI has evolved from simple rule-based systems to highly complex creative creation by machine learning. The modern generative AI systems are built with

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a large language model and neural networks, trained with a large amount of data. With this progress, AI systems have been able to perform tasks that were once thought to be uniquely creative human abilities, such as writing poetry, creating digital art, writing music, and programming computer code.

2. ***Under the law of copyright, the concept of authorship is of primary importance.***

The idea of "authority" is fundamental to copyright. This is a traditional view of the law that has allowed for human beings to be classified as authors as creativity has always been linked to intellectual effort, originality and independent judgment. A human-centric approach is still being used by most copyright jurisdictions. The non-human has been rejected as author in many judicial decisions in the U.S. and Europe.

3. ***Ownership and use of AI-generated content is an issue of concern***

Ownership is an issue and AI-generated works. The question of ownership of works created by AI is one of the most disputed copyright issues. Ownership theories propose from the programmer, user, or the company that manages the AI system. But, some experts feel that AI generated creations should be in the public domain in the absence of sufficient human creativity.

4. ***Understanding the implications of AI-generated infringement.***

Understanding who is liable for infringement generated by AI. Copyrighted books, artworks, films, music and digital materials (on the Internet) are examples of materials that can be used to train AI systems. This has resulted in controversy over infringement, fair use, derivative works and licensing requirements. There are still outstanding issues on who will be liable for the developers, deployers, corporations and users of AI systems.

5. ***Copyright of AI training datasets.***

Generative AI models need a lot of data, including copyrighted material, to be the backbone of these models. The authors, artists and media companies have brought several cases to court over the use of their works to train the AI. These wars have reignited the discussion on creators' issues such as transparency, consent, licensing, compensation, etc.

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6. ***This course covers the concept of legal personhood and AIs.***

   To resolve ownership and liability questions, some academics have suggested that AI systems be given limited legal status. But most legal experts have been opposed to the concept on the grounds that AI systems do not have consciousness, moral agency, emotions, or accountability. So responsible laws for human actors who control AI systems still remain in place.

7. ***Fostering the growth of the AI market***

   There are various ways to handle AI-generated works in various jurisdictions. Strict human authorship requirement in the United States and limited human authorship requirement in the United Kingdom. The EU is keen on transparency, accountability and ethical regulation of AI.

8. ***Future of copyright law in the age of AI.***

   Lastly, explore the future of copyright law in the era of AI. There is going to have to be some balancing in the future of copyright law between fostering technological innovation and the rights of human creators. Many countries are considering various legislative changes that could impact AI-generated works, such as licensing, transparency, and accountability measures. A combination of human and technological solutions that can be incorporated into legal systems will be seen in the future.

Comparative Table 1: International Approaches toward AI and Copyright

Jurisdiction	**Authorship Position**	**Ownership Approach**	**Legal Status of AI**
India	Human-centric	Person causing work creation	No legal personhood
United States	Human authorship mandatory	Human creator only	AI not recognised as author
United Kingdom	Computer- generated works recognised	Programmer/operator	No legal personhood
European Union	Human creativity required	Human oversight model	Ethical regulation focus

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Comparative Table 2: Major Copyright Challenges in AI Systems

Issue	**Legal Challenge**	**Possible Solution**
AI Authorship	Lack of human creativity	Human oversight requirement
Training Data	**Use of copyrighted content**	**Licensing frameworks**
Ownership	Unclear rights allocation	Statutory clarification
Liability	Difficulty identifying responsible party	Human accountability model
Cross-border AI	Different legal standards	International harmonisation

Comparative Table 3: Landmark Cases on AI and Copyright

Case	**Jurisdiction**	**Key Issue**	**Decision**
Naruto v. Slater	United States	Non-human authorship	Animals cannot own copyright
Thaler v. Perlmutter	United States	AI-generated artwork	Human authorship required
Nova Productions v. Mazooma	United Kingdom	Computer-generated work	Rights granted to programmer

CHAPTER III

LITERATURE REVIEW

In recent years, the subject of Artificial Intelligence and copyright law has garnered a lot of scholarly interest. The authorship, ownership, originality and liability for works generated by AI are a source of much conflicting and opposing literature.[8] The first are those who are proponents of the "old-fashioned" human-centred copyright model, who are emphatic about their support for this model. From this point of view, copyright is always a natural extension of the creative, personality, intellectual and moral right of the human person. Some others, like Jane Ginsburg, say that copyright should still be for people only because AI systems are not emotional or intentional, do not have moral agency, and are not conscious.[9] There is another strand of literature however, that has a more pragmatic and innovation oriented approach. If AI-generated works are not protected, it will reduce investments in AI and creative technology, some scholars have argued. This would imply transferring ownership rights to the programmers, developers, corporations or users who have made a substantial contribution to the creation of the Ai-generated material, rather than the traditional understanding of human

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creativity, based on commercial utility and economic requirements.[10] It does not seem that the attitude towards computer-generated work is as rigid as that of the copyright law of the United Kingdom. This is the type of work that is recognised by the UK Copyright, Designs and Patents Act, which gives the author of a computer-generated work 'the person by whom the arrangements necessary for the creation of the work are undertaken'.[11]

Those who want to argue for this model say it offers more legal certainty and encourages technological development. The amount of literature on infringement and liability issues is also quickly growing. They've expressed concerns about the copyrighted materials being used for training AI systems. Generative AI models often are built using vast quantities of copyrighted content like books, paintings, music, film and content from the internet. As a result, the concept of "fair use," the issue of licensing and whether a derivative infringement had actually been committed and, if it was, the amount of compensation to be paid to the creator has become more important.[12] The other significant discussion is based on "AI Legal personhood." It has been suggested that AI systems should have some form of legal recognition to streamline ownership and liability issues. However, most legal professionals are not happy with this concept as it lacks consciousness, accountability and moral responsibility.13 They argue that this would give rise to immense moral and legal issues and the lack of accountability of the developer of the AI system and the corporations. The literature reveals that while it is acknowledged that AI is a technology that impacts creative industries, there is no agreement as to the legal framework for regulating works created using AI.

CHAPTER IV

RESEARCH METHODOLOGY

Doctrinal method, Comparative method and a Qualitative method are used in the present study to analyse the legal implications of Artificial Intelligence in the domain of the copyright law. The study examines the legal provisions about works created with the help of artificial intelligence and copyright protection in the Copyright Act, 1957 and conducts a doctrinal analysis of the developments in the law in the United States, the United Kingdom and the European Union. All the analysis in this study is done in a comparative legal manner both with regard to the developments in India and in the United States, in the United Kingdom and in the European Union. The study investigates the problems of authorship, ownership, originality and liability, through comparative analysis.

A detailed examination of key cases that have appeared before the court has been studied to understand the evolution of judicial thinking such as Naruto v Slater, Thaler v Perlmutter and

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Nova Productions Ltd v Mazooma Games Ltd. The major laws referred to in the present study are the Copyright Act 1957, U.S. Copyright Act, Berne Convention, International Copyright Regulations, Court Judgements in Indian and foreign courts, and various government reports and policy statements regarding Artificial Intelligence and IP Law. These are the main materials that are crucial to the research, which can be used to inform a legal and/or judicial perspective on authorship and ownership and whether the AI-generated work is original or liable for copyright infringement.

Doctrinal and analytical interpretation has been also extensively used secondary legal sources. These secondary sources comprise of books, Journal articles, research papers, law review articles, intellectual property commentaries and reports from the World Intellectual Property Organization (WIPO) and other technology organisations. The materials offer evidence of scholarly reflection, comparison, policy analysis and critical analysis on the development of the copyright/technology relationship with AI.

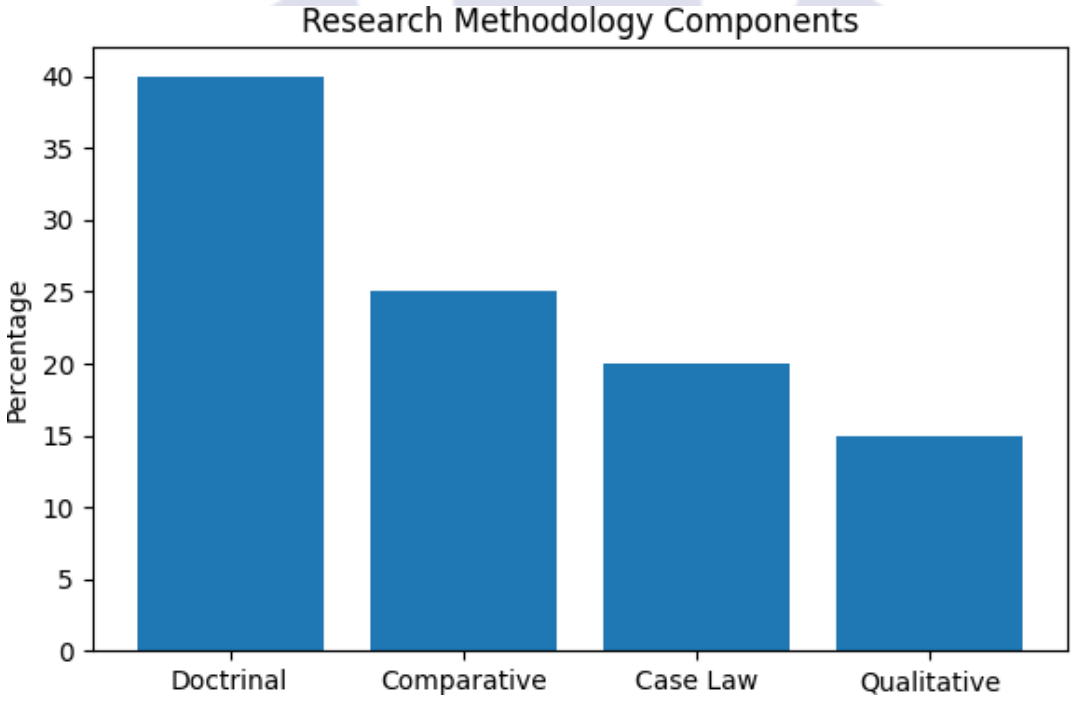

Figure 1: Distribution of Research Methodology Components

It showed that the distribution of the components of research methodology in the 2013 curriculum was in the following proportions (shown in figure 1 below). A qualitative analytical approach is also used in this study, which aims to gain insight into the legal concept of authorship, ownership, originality, infringement and liability of the AI-generated works.

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CHAPTER V

DATA COLLECTION AND DATA ANALYSIS.

The present study is a secondary research study and the data collected is of trusted legal and academic sources. Statutory provisions, judicial precedents, academic literature, reports from WIPO, government publications and policy papers have been used to conduct the research and information has been gathered. The analysis of the collected data has been done using a qualitative and doctrinal analytical approach. In order to find legal principles in regards to authorship, ownership, originality and liability when using works that have been created with AI, existing laws and jurisprudence have been carefully considered. The comparative study shows that the paradigm of a human-centred copyright system exists in the majority of jurisdictions and that, for most jurisdictions, there is no copyright protection for AI systems as authors. The paper also explores legal uncertainty regarding ownership and liability with regard to outputs created by AI.

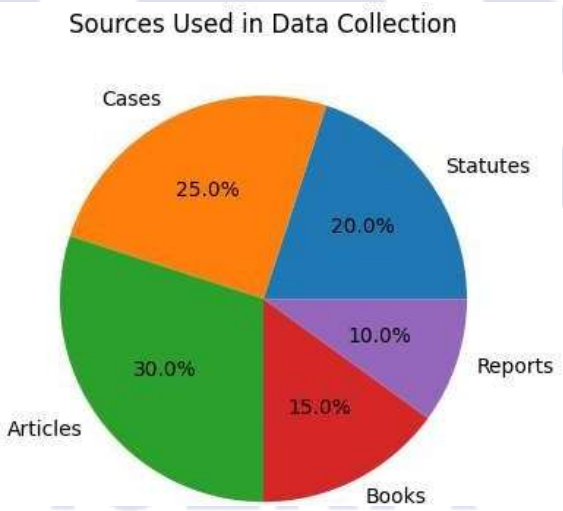

Figure 2: Sources Used in Data Collection

The data analysis has been done by qualitative and doctrinal analytical framework. The existing law and case law has been carefully analyzed to establish the concepts of authorship, originality, authorship ownership and liability in AI-generated content.

A comparison reveals that most jurisdictions retain a human-centric copyright regime, and that there are no obvious jurisdictions that recognize AI systems as copyright owners. The study also points out the differences between jurisdictions with respect to the title of computer-generated works.

The analysis is also confined to the areas of AI training data and derivative infringement.

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Content used in training generative AI models may inadvertently cover copyrighted material collected from the Internet, leading to potential legal problems with fair use and licensing obligations, as well as compensation for the copyright owners.

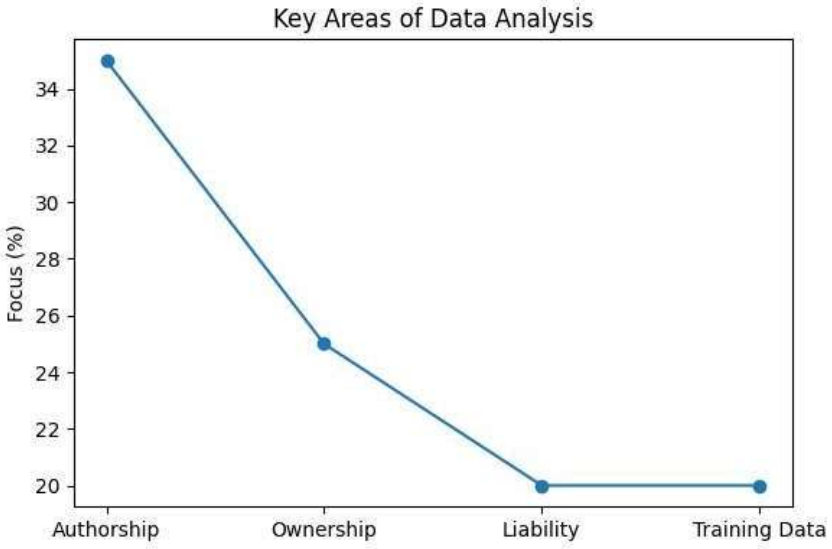

Figure 3: The major areas of data analysis are represented.

1.1 CASE STUDY ANALYSIS

Case Study 1 Naruto vs. Slater

Here, a monkey took pictures by using a camera belonging to a photographer. This judgment was consistent with the previous one on the issue of a copyright owner being a non-human.

Case Study 2: Thaler v. Perlmutter

This decision was issued by the U.S. authorities to deny protection of copyright to works of art created automatically by an AI system with no meaningful human involvement.[18]

Case Study 3: The Nova Productions Ltd v Mazooma Games Ltd case

This shows a more pragmatic attitude of the UK court to computer-generated content, where it did recognise copyright in the computer-generated work, but it was the human being, the programmer and operator, who were the owner.[19]

Case Study 4: Indian Legal Status

Despite the definition of "person who causes the work to be created" in the Copyright Act, 1957 (Act) with respect to computer-generated works provided under Section 2(d)(vi), the

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Indian courts have yet to expressly clarify the meaning of this provision in relation to Generative AI systems. So, it's a bit hazy in India.

CHAPTER VI

FINDINGS

When considering generative AI technologies and copyright of AI-generated creative works, a few important lessons from the present study into the relationship between Artificial Intelligence and copyright are highlighted. These conclusions have been based on the analysis of the statutory provisions, judicial precedents, academic publications and policy documents relating to the question of AI-generated content.The conclusions are based on statutory provisions, judicial precedents, publications and policy documents on the subject of AI generated content.

1. The first key finding of the study is that the majority of the legal frameworks in most countries still have a human-centred approach to copyright. The existing Indian/US/Few European copyright laws rely on originality, creativity, intellectual effort and human skill as bases of copyright protection. The courts in both cases (Naruto v. Slater and Thaler v. Perlmutter) decided that the author is not a non- human. The U.S. Copyright Office has provided its policy guidance on AI- generated works in 2023, stating that "works that do not have 'enough human authorship or creativity'" will not be protected by copyright law. This is a typical case of humans preferring to work creatively rather than machines working creatively, that is, the human copyright owner prefers to create something himself rather than having a machine create it for him.

2. The study also shows that the legal landscape regarding the ownership of works created by AI is not defined and is country-specific. There is some copyright protection for a computer-generated work in some jurisdictions (such as the UK), and the copyright belongs to "the person making necessary arrangements", but other jurisdictions are not yet providing copyright protection if the work is generated without significant human involvement. In several countries, the creators, developers, corporations, as well as the users of generative AI systems do not have clarity and security when using it for commercial and creative purposes.

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3. Another discovery is related to the economic and technological effects of generative AI systems. According to Goldman Sachs and McKinsey Global Institute, in the next ten years, generative AI technologies will influence the worldwide economy by trillions of dollars, especially in the automation, content generation, and digital innovation sectors. There is a rise in concerns about legal matters, particularly in the publishing, entertainment, advertising, education, journalism and software industries, which are creating a new market in AI-generated content.

4. Finally, the study shows that the issue of training data for AI has become one of the most contentious legal issues of the current copyright law. A large number of systems of generative AI are educated using huge volumes of copyrighted books, articles, artwork, photos, movies and internet content that were captured digitally without permission. The World Intellectual Property Organization (WIPO) and the European Parliament have issued reports about uses of copyrighted material in AI training, with a lot of discussion on the idea of "fair use," the need for licensing and derivative infringement, and compensation. This tension between progress and IP rights is further underscored by numerous lawsuits by authors, artists and media companies against AI companies.

5. The study also reveals that current legal frameworks are insufficient to respond to liability issues that may be generated as a result of infringement by AI. It was assumed that the existing copyright system would apply to the conduct of human actors, and there are very few clues of who is liable to copyright infringement when the act of copyright infringement is carried out by an autonomous or semi- autonomous AI. No clarity on who should be liable, ranging from the developer, the programmer, the deployer, the corporation or the end-user of the AI technologies. This uncertainty of the law hampers the possibility of creating efficient enforcement and dispute resolution systems.

CHARTS AND FIGURES

The figures and statistics in the following charts and statistics are taken from publicly available reports and statistics from various sources, such as the World Intellectual Property Organization (WIPO), OECD and international policy reports on Generative Artificial Intelligence.

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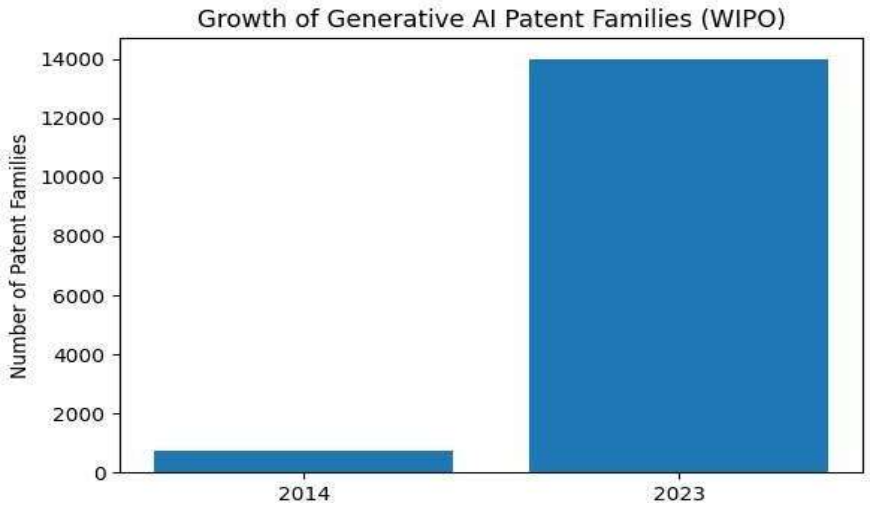

Figure 1: illustrates the trend of the number of generative AI patent families (sets of related patents) granted throughout time.

The WIPO Patent Landscape Report on Generative Artificial Intelligence (2024), developed by the World Intellectual Property Organization (WIPO), shows that the number of GenAI patent families has increased over 800% in less than a decade from 733 to more than 14,000 in 2023.

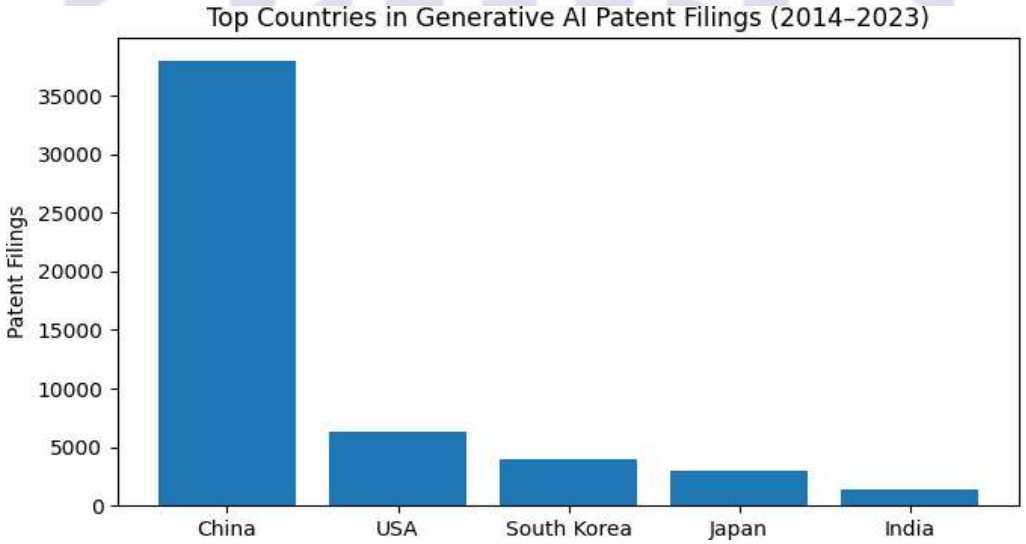

Figure 2: The top countries in terms of generative AI patent filings

According to WIPO, the United States, followed by China, South Korea, Japan and India, respectively, have the largest number of Generative AI patent applications filed between 2014 and 2023 (in that order, with more than 38,000 applications being filed in China).

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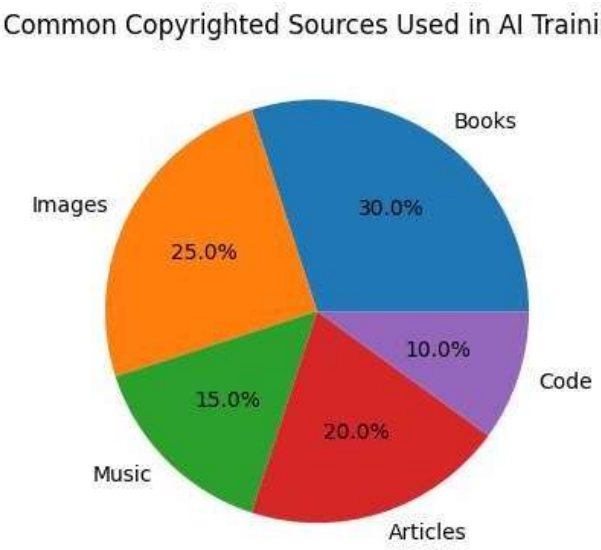

Figure 3: Some of the most common Copyrighted sources used for AI Training

Policy reports and legal studies of datasets show that books, images, music, articles and software code are all used as examples of copyrighted materials that are commonly used to train generative AI systems.

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- WIPO Patent Landscape Report on Generative Artificial Intelligence (2024).
- OECD Reports on Generative Artificial Intelligence and Economic Impact.
- World Intellectual Property Organization (WIPO) data shows that most patent applications are from China and the United States, as per Generative AI Patent Statistics.
- European Parliament reports on AI and copyright law.

There are a number of important conclusions of the study:

1. Most copyright regimes are still fundamentally people oriented.[21]
2. AI-generated content generally is not considered to be a legal author in and of itself.
3. The legal status of ownership of AI generated works is uncertain.
4. Human responsibility is still at the core of the ownership and liability.
5. The overlap of copyright with AI training data and copyright infringement is not sufficiently addressed by current laws.
6. It is currently not feasible or legally required to give legal personhood to AI systems.[22]

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Now, there is no uniformity in the global attempts to control AI. There is need to have clarity on norms of liability and AI creations in India through legislation.

CHAPTER VII

RECOMMENDATIONS AND SUGGESTIONS

As Artificial Intelligence technologies and machine-generated creativity have skyrocketed, there has been an exposure of the weaknesses of the current copyright laws around the globe. The traditional copyright laws and policies, which applied to the protection of human creativity and intellectual effort, are now encountering novel issues of authorship, ownership, originality, liability and infringement in the era of Generative AI systems. A thorough reworking and updating of the copyright law is required to maintain its balance, relevancy and effectiveness in a technologically sophisticated world. The following recommendations and suggestions are proposed to overcome legal issues of Artificial Intelligence and copyright: How to use this resource:

7.1 Amendment of the Copyright Act, 1957:

The study has made a number of recommendations one of which is an urgent need to make amendments to the Copyright Act, 1957 in relation to Artificial Intelligence and works produced by Artificial Intelligence. The existing law – as it stands in the Act – was drafted many years ago, well before the advent of modern tools of generative AI and is not fit for the purpose of regulating the autonomous AI generation. In the case of computer-generated works, section 2(d)(vi) of the Copyright Act mentions "the person who causes the work to be created", but the provision is unclear as to how much human intervention is required for a work to be considered "created" for the purposes of copyright. Thus, it is essential to establish legal definitions that explicitly cover the legal nature of AI works in the legislation, as well as frameworks for ownership and the liability regime for AI systems. The suggested amendments to the act should make it more clear to distinguish between: 1) works that involve a lot of creativity and a significant human contribution, assisted by AI; 2. Works entirely created by AI; and 3. Hybrid collaborative works that are human-machine co-production. This kind of statutory clarification would help to minimize legal uncertainty and protect creators, developers, corporations and users better.

7.2. Incorporate into the framework the concept of human accountability.

Include the concept of human accountability in the framework. The study strongly calls for a

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human accountability system instead of the granting of independent legal personality to Artificial Intelligence systems. At the present time, the AI systems are not conscious, they have no intention, they are not capable of emotions, they do not have moral values, they cannot be legally held responsible. So, granting AI systems autonomy in terms of rights or liabilities would raise significant legal and ethical issues. Human accountability model: The responsibility for the AI generated outputs should be assigned to identifiable humans who have control over it: developers, program designers, deployers, corporations and the end users. That would mean that there would be a legal obligation and not a "legally unmanageable" obligation such as a corporation would be passing to independent machines.

7.3 To set up licensing systems for training of AI data and management.

One of the more sensitive issues is the use of copyrighted content in training machine learning systems and that's why it has been a prominent concern when it comes to generative AI. The copyright owners of books, artworks, pictures, movies, articles, music and internet information are not consulted, and the copyright material is downloaded and used by the AI developers. The study suggests a formal licensing system for training data that uses AI must be established. This may include: Compulsory licensing systems; Collective management organisations; Royalty distribution mechanisms; Creator compensation funds and Data transparency obligations. The proposed innovations and protections would enable AI technologies to be developed while also ensuring that the works of copyright owners which are used to train AI models are fairly compensated.

7.4. Clarification of Human Creativity Threshold

The child explains the Human Creativity Threshold. The minimum amount of human creativity, needed to obtain copyright protection for works created using the assistance of AI, should be specified by law or judicial rulings. How much the human author has to do in order to create a work with the help of an AI is still not clear, nor is it clear if there is such an thing. Based on the study, copyright may be limited to situations where the elements below exist: Humans make a meaningful contribution to the creation; Human intellectual input is significant; and Human judgment is key in the creation. This would not affect the traditional function of the copyright law, and it would allow technological innovation.

7.5 The new Specialised AI Regulatory Authorities.

The problems of Artificial Intelligence, machine learning and digital content are intricate and

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there is a need for specific institutional structures to face the new challenges. The study thus suggests creating specialised regulatory bodies for AI and Intellectual Property to: Monitor AI-generated content; Deal with copyright issues; Regulate AI training datasets; Set ethical norms; Audit AI systems; and Implement transparency requirements. These special bodies would be useful in responding effectively to the swiftly evolving technological advancements undertaken by governments.

7.6 International Harmonisation AI systems transcend borders and function on the global digital networks and online platforms. However, the laws and their interpretations in different countries conflict on the issue of authorship, ownership, liability and protection of AI-generated works. It is suggested to have more copyright harmonisation between countries by the following organizations: World Intellectual Property Organization (WIPO); United Nations; OECD; WTO; International copyright forums. International harmonisation would help to reduce jurisdictional disputes and ensure a common legal framework for multi-national AI systems.

7.7 Transparency and Disclosure Obligations

There are legal obligations for the AI developers to be transparent about: How they generated their own sets of data; Whether they used copyrighted data for their AI systems; How the AI will make decisions; How they gather data; and how they will generate content. Adopting transparency measures would be beneficial for copyright owners because they can detect plagiarism and for the public's trust in AI systems. Such measures would also help make the programs more accountable and lessen the illegal use of copyrighted material.

7.8 Support Ethical AI Development

Additionally, the study recommends incorporating ethical principles into the design and use of AI systems. The ethical concerns of AI systems should include Fairness, Accountability, Transparency, Non-discrimination, Respect for IP rights and Human oversight. Putting in place ethical norms that are extended to governments as well – to protect creators and for responsible innovation – by the technology companies.

7.9 Promotion of Academic Research and Public Awareness

There is an ongoing evolution of laws and regulations in relation to AI and copyright, and additional research and analysis are essential. Hence, it is recommended that by such

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institutions as universities, legal institutions and research centres, it should be promoted through academic studies, Legal research, Public consultations, Workshops, Awareness campaigns and Interdisciplinary collaboration. Awareness and understanding of the concepts of AI-generated content, copyright, and digital ethics need to be raised to aid in policy decision making.

7.10 Development of Hybrid Copyright Models

There might be a need for some new hybrid legal systems to accommodate future copyright needs that enable collaborative creation of human and machine. These systems are supposed to enhance human creativity, and should recognize technology. Potential hybrid copyright systems: Shared ownership regimes, using AI to identify copyright, time-limited copyright protection for AI-generated work, separation of AI-generated content and distinct classes. The changes would enable to modernize copyright, while retaining its philosophical principles of protection of intellectual property.

CHAPTER VIII

CONCLUSION

AI has become one of the most impactful tech advances of the current times. AI has had a profound impact on the field of intellectual property (IP) law, introducing a new category of AI-generated literary works, paintings, music, movies, computer software programming, and more. With the sophisticated capabilities and autonomy of AI systems, it's no surprise that traditional copyright structures are being tested like never before. Historically, copyright law has been created to protect the human creative expression, the intellectual labour, originality and personal expression. It was generally agreed that the principles of copyright protection should be established on the grounds that works of creativity are the result of the independent exercise of skill and judgment and the intellectual efforts of the human author. Today, however, creative products of modern AI can be hugely complex and sophisticated, and created with minimal human involvement, undermining the traditional concept of authorship and ownership. It is quite evident from the present study that, although all the existing copyright systems in the various countries are still basically human-centric. In Naruto v. Slater, judges have made it clear they are not interested in treating non-human entities as legal authors; and in Thaler v. Perlmutter, judges have made it abundantly clear that they do not wish to consider non-human entities as legal authors; and in Nova Productions Ltd. v. Mazooma Games Ltd., judges have made it abundantly clear that they do not wish to consider non-human entities as

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legal authors. Ability to exercise considerable human creativity and intellectual effort is generally still needed to secure copyright protection. The study also finds a great deal of legal uncertainty in the area of AI-generated work ownership. There are several distinct systems of law and each has different requirements as to authorship and rights of ownership to and liability for computer-generated works. Limited recognition is provided by some jurisdictions for computer-generated works, while others are not willing to protect a computer work unless it has a meaningful human contribution. The study also underscores the critical importance of AI training data as one of the biggest copyright issues of this digital era. A big number of copyrighted books, art, music, photographs, articles and films are placed in a Generative Artificial Intelligence system.

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