

Moral Rights and Generative AI Training under the Pakistani Copyright Ordinance 1962: A Comparative Analysis

Muzamil Ahmed¹, Nazura Abdul Manap^{2*}

¹Faculty of Law, Universiti Kebangsaan Malaysia, 43600, Bangi, Selangor, Malaysia.
Email: p154870@siswa.ukm.edu.my

²Faculty of Law, Universiti Kebangsaan Malaysia, 43600, Bangi, Selangor, Malaysia.
Email: nazura@ukm.edu.my

ABSTRACT

CORRESPONDING

AUTHOR (*):

Nazura Abdul Manap
(nazura@ukm.edu.my)

KEYWORDS:

Moral rights
Generative artificial intelligence
(AI) training
Copyright Ordinance 1962
Attribution
Integrity

CITATION:

Muzamil, A., & Nazura, A. M. (2026). Moral Rights and Generative AI Training under the Pakistani Copyright Ordinance 1962: A Comparative Analysis. *Malaysian Journal of Social Sciences and Humanities (MJSSH)*, 11(7), e004086.
<https://doi.org/10.47405/mjssh.v11i7.4086>

The normative foundations of copyright regard moral rights as an extension of the author's personality rather than a tradable commodity. This envisages conferring upon authors a range of rights that continue to apply even after their economic rights are transferred or exhausted. The training of generative AI on extensive datasets of copyrighted works has attracted significant scholarly interest regarding potential violations of economic rights. However, less attention has been devoted to assessing how moral rights are implicated by large-scale data acquisition and machine learning processes used in generative AI training under the laws of developing states such as Pakistan. This research aims to fill this gap by employing a qualitative doctrinal methodology to analyse moral rights-related concerns arising from AI training under Pakistan's Copyright Ordinance 1962. It seeks to identify unresolved concerns regarding moral rights during data collection, preprocessing, and fine-tuning stages of the training process. The study conducts a comparative analysis of the Copyright Ordinance with moral rights frameworks of the United Kingdom and the United States. Finally, the normative position of moral rights issues within the laws of these jurisdictions is assessed using the personality theory as a normative framework. The study finds that attribution-based claims provide a stronger legal basis for challenging AI training activities than integrity-based claims due to the substantial evidentiary burden in proving prejudice to honour or reputation. The study further demonstrates that Pakistan's moral rights framework offers broader protection than the United States but lacks specific guidance regarding its application to AI training.

Contribution/Originality: This study contributes to existing literature by using a personality theory-based framework to evaluate moral rights issues in the training process of AI. Through a comparative analysis, the study offers the first comprehensive assessment of moral rights issues under Pakistan's Copyright Ordinance 1962 arising from the training of Generative AI models.

1. Introduction

Generative AI systems have become capable of producing text, images, music, and all forms of creative works at ease. This has enabled the systems to transcend into one of the most impactful and disruptive technologies of the digital age (Alabi, 2024). While they may offer useful applications, the widespread adoption of these technologies has also raised concerns among copyright holders due to their ability to imitate the style and expressive elements of their works easily (Nielsen, 2025). A depiction of these concerns could be seen through a recent trend concerning the circulation of AI-generated images in the style of Studio Ghibli and Hayao Miyazaki's works, which highlight the growing tension between technological progress and the protection of creative expression in the age of AI (Maria & Fakrulloh, 2025).

The incorporation of creative expression into the training process raises a host of issues, including violations of the reproduction and adaptation of copyrighted works (Gervais, 2021). Many rights holders have filed lawsuits against tech giants such as OpenAI, Google, Meta, Anthropic, and other leading generative AI service providers, alleging infringement of these economic rights (Travis, 2025). In one of the lawsuits against Anthropic, the rights holders secured the largest copyright settlement in global history, valued at US\$1.5 billion, over the company's acquisition and use of pirated copies to train its AI model (Rimmer, 2026). Many of these cases continue to be litigated before courts in the United States, the United Kingdom, the European Union member states, China, India, and various other jurisdictions, which reflects the transnational character of copyright disputes concerning generative AI (Lucchi, 2024; Zhang & Guo, 2026; Lucchi et al., 2026).

However, a closer review of copyright literature demonstrates that these concerns extend beyond economic harm and may also implicate moral rights. For instance, the right of integrity ensures that any harmful modification or distortion of a copyrighted work that prejudices the author's honour or reputation is prohibited by copyright law. In addition to integrity, the right of attribution ensures that the author is credited for the effort they have put into the creative process (Dworkin, 1994). The nature of these rights makes them susceptible to being implicated by the training process.

The implications of the training process vis-à-vis these rights do not appear prominently in the academic literature, as most scholarly attention has focused on copyright litigation over violations of the reproduction right. The reason these issues require separate attention from the reproduction issues is that moral rights are not curtailed through any copyright exceptions. The fair use or fair dealing exceptions apply only to violations of reproduction, adaptation, broadcasting, or other forms of harm to economic rights (Smith, 2019). Therefore, if issues were to be pressed into service under moral rights and were to be successfully substantiated before the court of law, they would create a parallel liability that could not be condoned through any copyright exception.

From this perspective, it can be observed that special consideration is required to study these attribution and integrity claims within the context of global South scholarship, drawing on Pakistani copyright laws. This paper seeks to bridge this gap by examining the implications of these moral rights of attribution and integrity within the training process. The paper also adopts a comparative law approach to explore how the UK's greater protection of moral rights and the Anglo-American application of these rights address issues arising from the generative AI supply chain. Finally, the legislative

response to the use of copyrighted works for Generative AI training under moral rights is analyzed from a personality-theory perspective to assess its normative orientation.

In what follows, the paper is divided into three parts. Part I of the paper provides a technical primer of generative AI training and the moral rights issues arising from this process. Part II examines these issues specifically under the laws of the UK and the United States. Finally, Part III examines moral rights protections under Pakistan's Copyright Ordinance and related concerns, and also seeks to learn from similar issues in the UK and the US to evaluate the unique position of integrity and attribution under the Copyright Ordinance 1962.

1.1. Research Objectives

The research seeks to explore the extent to which the process of generative AI training implicates authors' moral rights of attribution and integrity under the copyright laws of the US and the UK, and how it compares with the implications of 'special rights' protections and the AI training process under the Pakistani copyright law.

2. Literature Review

Rights holders have found the mass ingestion of copyrighted works in AI training to be concerning, since these systems are largely trained on datasets that incorporate their creative works (Dornis & Stober, 2025). Much of the existing literature already covers the range of these copyright issues related to Generative AI training. At the input stage, the key copyright implications include infringement of the reproduction right during data collection, training, and fine-tuning. For generative AI outputs, the debate revolves around infringement of reproduction rights (Matulionyte, 2025). Similarly, the discussion over whether AI-generated outputs qualify for copyright protection centres on the originality and the authorship of works generated by AI (Fenwick & Jurcys, 2023). In response to these challenges, scholarship has analysed existing exceptions to copyright and their application to different stages of the Generative AI lifecycle (Lee et al., 2023). In the European Union, research has aimed to explore the regulation of training activities through the text-and-data mining exceptions within the Digital Single Market, as well as through the recent transparency obligations introduced by the Artificial Intelligence Act (Rosati, 2025). The US needs special consideration since most cases concerning generative AI training and copyright are being adjudicated in its courts. From the US perspective, scholars have examined the application of the fair use exception to the training process (Sag, 2023). Although there is a growing body of literature analysing moral rights and AI training, most of this scholarship is framed around the laws of developed nations (Bersh, 2025; Kahveci, 2023; Yuvaraj, 2025).

The studies on the relationship between the Copyright Ordinance 1962 and Generative AI in Pakistan have largely focused on whether AI-generated works qualify for copyright protection. For example, Abdul et al. (2024) analyse how AI-generated works are treated under the Copyright Ordinance 1962. Similarly, scholarship has investigated the lack of guidance on the application of the Ordinance to these AI-generated works (Khan et al., 2024). Mushtaq et al. (2024) also examine issues related to AI-generated works from an antitrust perspective. More recently, Arfat et al. (2026) have examined the doctrine of fair dealing and its application to Generative AI training under the Ordinance.

These papers identify limitations in applying the Copyright Ordinance to the training process for Generative AI. However, most of these studies focus on violations of economic rights and do not address how attribution and integrity rights might be affected during Generative AI training. Moral rights issues at the input stage, from the perspective of the laws of developing nations in the Global South, such as Pakistan, have continued to evade academic attention. The existing scholarship has primarily focused on the economic rights implications of AI training. However, there is a significant uncertainty regarding the adequacy of existing copyright doctrines to address non-economic interests. Moreover, the implications of moral rights remain largely unexplored within Pakistani legal scholarship.

3. Research Methods

This study primarily adopts a qualitative doctrinal legal research methodology to examine how moral rights of attribution and integrity are implicated during the input stage of generative AI training under Pakistan's Copyright Ordinance 1962 (Dobinson & Johns, 2017). Since the study critically evaluates and synthesizes the current position of law, doctrinal legal research is the most appropriate methodology for this form of inquiry (Khan et al., 2026). A comparative legal method is applied alongside the doctrinal analysis to examine how similar concerns are addressed under two advanced copyright systems, the United Kingdom (UK) and the United States (US), in order to draw inferences for Pakistan's Copyright Ordinance (Majeed et al., 2023).

Due to the dearth of research and judicial authorities on moral rights under the Pakistani Copyright Ordinance, the comparative method is employed to elucidate their application in these jurisdictions. It provides a model for examining how these training issues could be addressed within legal systems founded upon different normative justifications (Van Hoecke, 2015). The US and UK were selected for multifaceted reasons. The US Copyright law was selected for its unique moral rights framework and its active engagement with AI and copyright issues in recent litigation. The UK was selected due to the common-law roots of Pakistani copyright law and as a model for a jurisdiction that offers greater moral rights protections than those required under international law.

The legal authorities consulted in this study include Section 62 of the Pakistani Copyright Ordinance 1962, the UK Copyright, Designs and Patents Act 1988, the US Visual Artists Rights Act 1990, Section 1202 of the Digital Millennium Copyright Act, Article 6bis of the Berne Convention for the Protection of Literary and Artistic Works (the "Berne Convention"), and the WIPO Copyright Treaty 1996. The research also employed secondary sources, including searches of legal databases such as Westlaw, HeinOnline, and Google Scholar, as well as peer-reviewed journal articles, book chapters, and official government reports, including the UK government's 2024 Copyright and Artificial Intelligence Consultation.

3.1. Limitations of the Study

The study is limited to examining moral rights issues related to the input stage of generative AI training under the copyright laws of Pakistan, the UK, and the US. While integrity and attribution concerns may also arise at the Generative AI output stage, such concerns are outside the scope of this study. Nevertheless, references to the output stage

have been included where they are deemed indispensable. The primary emphasis of this study, however, remains on examining these concerns at the input stage.

4. Results and Discussion

4.1. The Generative AI Training Process

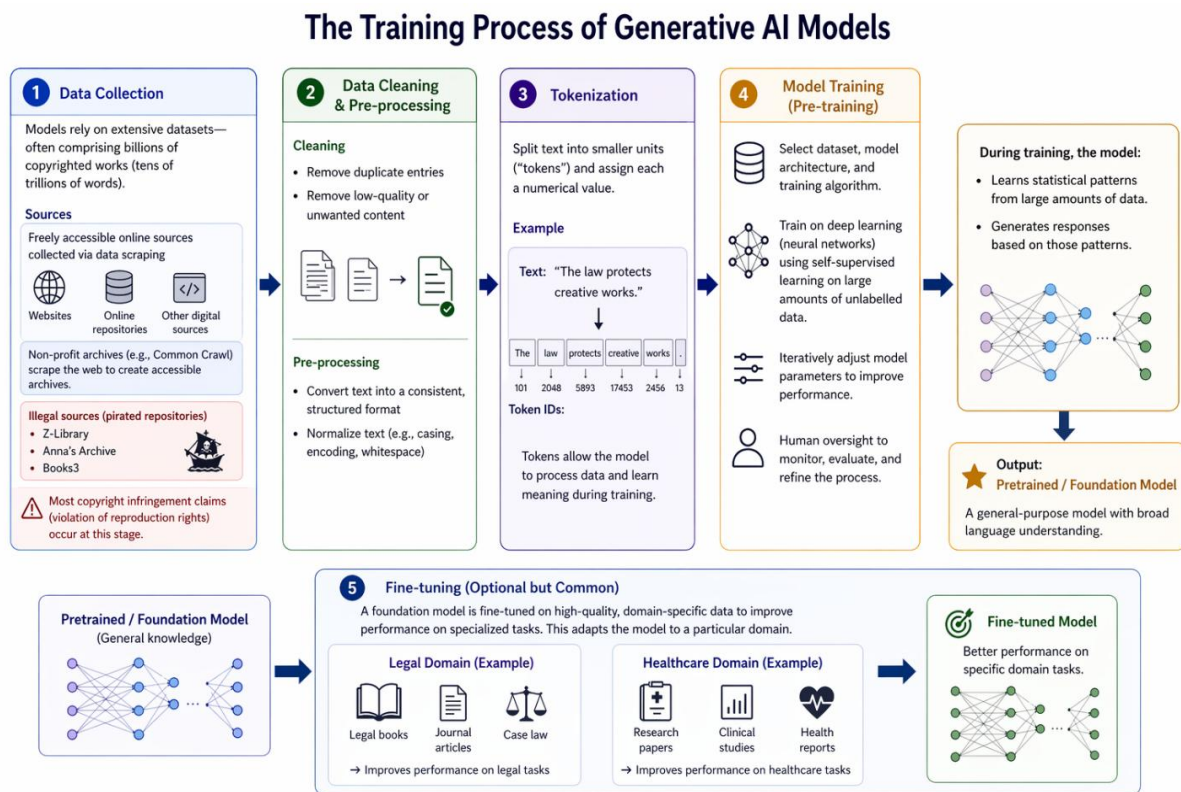
Generative AI derives its capabilities to produce human-like responses from its training data. The first step in training these systems, therefore, is data collection. Most of this data is gathered from freely accessible online sources and collected through processes known as text and data mining/scraping. This scraping is conducted using automated tools that systematically extract training materials from websites, online repositories, and other digital sources. Some non-profit organizations, such as Common Crawl, could scrape the entire internet to create archives that are subsequently accessible to users (Hong et al., 2025).

After creating a training dataset, the next step is to clean such data for training. This mainly involves removing duplicate entries, such as identical files. The data is then pre-processed into a suitable format for training. After pre-processing, the next step is tokenization, which primarily involves splitting text into smaller units, known as 'tokens', and assigning each token a numerical value. This is what allows language models to process the data and then learn to interpret the meaning of tokens subsequently during training (Borghi et al., 2025). Once this data is cleaned and pre-processed, the model training process commences with selecting the dataset, model architecture, and training algorithm (Lee et al., 2023).

The model is trained on deep learning, which involves neural networks with multiple layers that imitate a human brain and are capable of recognizing patterns and producing outputs through self-supervised learning based on large amounts of unlabelled data (Hoshidar & Kiran, 2024). To enhance AI's capabilities in specific domains, this model is fine-tuned on high-quality, domain-specific data (Anisuzzaman et al., 2025). For example, a model intended for application in the legal industry would benefit from being fine-tuned on extensive legal texts, such as books, journal articles, and case law. Similarly, a model intended for healthcare settings would benefit greatly from fine-tuning on health-related research. The training process can be summarised as shown in Figure 1.

Although this training process primarily raises implications for reproduction rights, it is worth noting that moral rights raise distinct issues that have evaded scrutiny by copyright scholars. To fully capture the issues of integrity and attribution in Generative AI training, the following section discusses these moral rights through the lens of personality theory and examines concerns associated with the training process.

Figure 1: Generative AI Training Process



4.2. Theoretical Framework: Personality Theory and Moral Rights

The normative justifications for copyright protection is dominated by four theories in intellectual property (Fisher, 2001). The first among those is the Lockean labour theory, which springs from the writings of John Locke. It posits that when a person mixes their intellectual effort with the vast abundance of God's creation, the author earns a property claim over the resulting expression (Craig, 2002). The second most well-regarded is the utilitarian theory, which stems from the teachings of Jeremy Bentham. The basis for copyright protection under utilitarianism is to achieve the greatest good for the greatest number of people by incentivizing people to create works (Bird & Ponte, 2006). The third of these theories is the Culture Theory, which approaches the justification of these rights similarly to the utilitarian perspective. It posits that copyright law should be shaped in a manner that promotes a just culture (Fisher, 2001).

This theory identifies several goals that contribute to the creation of a just culture. Accordingly, it argues that copyright law should be framed to facilitate the achievement of these objectives. The last among these is the personality theory, which originates from the teachings of Immanuel Kant and Friedrich Hegel. Hegel argues that individuals must have dominion over their feelings, traits, experiences, and creations to realize their full potential. Thus, when a person engages in creativity, he infuses his intellectual effort into the object, making it an extension of his personality (Moore, 2008). It also creates an emotional connection between the author and their creation. Personality Theory aims to safeguard this bond by supporting the moral rights of attribution and integrity, which go well beyond traditional economic rights (Damich, 1988).

Many moral rights granted to copyright holders in continental Europe and elsewhere are a direct result of these personality-based justifications for copyright protection (Moore, 2008). It can be noted that the Labour, Utilitarian, and Culture theories are only oriented towards addressing economic considerations, either by providing economic incentives for creating works or by maximizing the social benefits that arise from copyright protection. The theories justify economic rights through copyright protection and fail to provide for any basis for safeguarding the non-economic interests embedded within such property. Viewed from this angle, personality theory is the only normative framework that addresses the non-economic considerations between an author and their work. Thus, Personality theory provides a more useful approach for examining moral rights issues arising from the training process of generative AI.

The moral rights trace their origin from the French legal term “droit moral,” which refers to rights enjoyed by the copyright author in addition to the economic rights of reproduction, adaptation, distribution, etc (Liemer, 2011). These rights are exclusively held by authors engaged in creating copyrighted works. It must be noted that an author is sometimes distinguishable from the owner of the work. An owner is the one who holds the economic rights in a work, which may arise either from authorship, by creating the work itself, or from assignment, by transferring the rights to someone other than the author. Authorship, therefore, may be construed as non-transferable and remains with the author (Nwabachili & Nwabachili, 2015).

The scope of protection under moral rights is generally divided into two categories. The first is the right of attribution or paternity, which entitles an author to be identified as the creator of their work. The second is the right of integrity, which protects the work against any distortion, mutilation, or unauthorized alteration that could harm the author’s honour or reputation (Fernández-Molina & Peis, 2001). The primary international instrument for the protection of moral rights is set out in Article 6bis of the Berne Convention, which establishes a baseline for their protection. The Convention provides that it shall be incumbent upon the legislation of the respective States to provide for the continuation or exhaustion of these rights after the death of the author, and to specify the manner in which these rights would be enforced in practice (Geller, 1985).

Similar rights to authorship and integrity were also extended to performers of works in relation to live performances or to performances fixed in phonograms through the introduction of the WIPO Performance and Phonograms Treaty (James, 1991). Applying the minimum level of protection provided under the Berne Convention, it could be deduced that generative AI training implicates both rights. For example, regarding paternity rights, a key issue with Generative AI is the lack of attribution when authors’ works are used to train models. After an AI system is trained on a specific collection of works, it may incorrectly attribute those works to someone who did not author these works, resulting in misattribution. There is also a risk that these systems may fail to properly attribute works to whom they originally belong, potentially denying the original creator recognition or opportunities for attribution (Kahveci, 2023).

It may be noted that, based on the Generative AI lifecycle discussed above, this lack of attribution may arise after pre-training or fine-tuning, or at the output stage when the system is deployed for commercial usage. Broadly speaking, compliance with the attribution right in AI training can be accomplished through various methods. For example, indicating the original author's name, whose works are referenced in the

outputs of a Generative AI Model, or including a link to the source, can satisfy the attribution criteria under Copyright Law. (Kahveci, 2023). It could also be argued that the attribution requirements for using copyrighted works in generative AI training under moral rights resemble the 'transparency obligations' recently introduced in the European Union (EU) by the Artificial Intelligence Act, which require providers of generative AI services to disclose, in the form of high-level summaries, the copyrighted works used to train their generative AI models (Quintais, 2025).

The principal purpose of this transparency obligation, however, is not to enforce any moral rights but to ensure compliance with the Text and Data Mining exceptions within the Copyright in Digital Single Market (CSDM) Directive (Quintais, 2025). Even though the disclosure requirement is distinct and intended to ensure compliance with European copyright law, we may nevertheless draw some parallels. For instance, the actualization of this transparency obligation may also serve the purpose of attribution rights under the copyright law by enabling the right holders to be attributed for the use of their works in training data. However, it is also important to acknowledge that transparency obligations are not, in the traditional sense, a moral right per se, as copyright provides.

The transparency obligations are intended solely to support the TDM exceptions and to ensure compliance with the Union's copyright obligations. Another distinction is the granularity between the high-level summaries and the level of acknowledgment required by the attribution right. The transparency obligations require only high-level summaries of works to be disclosed and do not enable every copyright holder to identify their copyrighted works used in training data. Conversely, the attribution right provides a remedy for being recognized as the author of the work, raising distinct considerations beyond the training process.

In connection with the moral right to integrity, one could argue that original authors should have protection against modifications of their images used in AI training. This right enables authors to authorize or prohibit third parties from altering their works. Such rights might be violated during the training phase itself, when images are altered and integrated into model weights (Benhamou & Andrijevic, 2022). However, there are certain difficulties in substantiating a claim based on the moral right to integrity in this context. First, the scope of integrity rights varies considerably across jurisdictions. For example, in some jurisdictions, the moral right to integrity applies only if a modification harms the author's honour or reputation. While others recognize a broader moral right to integrity, which does not require proof of prejudice, as they view this right as part of the author's personality.

However, not all advanced nations have stronger integrity-related protections for all classes of works. For instance, in the United States, the right to integrity and attribution applies only to a limited category of works of 'visual arts'. As a result, authors may find it difficult to prove that changes to their works during AI training are prejudicial in the sense required to trigger the right of integrity. Even though integrity rights occupy an anomalous position within the US copyright framework, a related legislation provides remedies analogous to the right of attribution in copyright law within the Digital Millennium Copyright Act (DMCA) (Benhamou & Andrijevic, 2022). The next section examines these provisions under US copyright law and also explores recent litigation around this quasi-moral rights regime, which has garnered significant judicial attention in the wake of the proliferation of Generative AI systems.

4.4. Moral Rights and AI Training Under United States Law

Although moral rights are recognized almost universally, the US copyright law is an anomaly. More interestingly, despite the global influence of US law, the Copyright Act of 1976 does not recognize authors' moral rights as most copyright systems do. It may partly be owing to the reason that the US copyright law is heavily influenced by utilitarian tradition (Bird & Ponte, 2006). As discussed above, the moral rights justifications are based on personality theory, which identifies a deep personal connection between the author and the work, serving as justification for granting the author protection of paternity and integrity. In contrast, utilitarian principles are premised on maximizing utility to provide for the greatest good for the greatest number (Bird & Ponte, 2006). Since US copyright law is predominantly based on utilitarian principles, this theoretical orientation helps explain the absence of stronger moral rights.

While it would be an understatement to say that moral rights do not exist under United States copyright law, such rights are recognized only in a limited form. For example, traditional moral rights, such as the rights of attribution and integrity, are set forth in a specific provision that applies solely to visual artists and were included in US copyright law through the enactment of the Visual Artists Rights Act (VARA). However, as previously mentioned, this protection is limited to visual artists and does not extend to other works, such as literary, musical, or artistic works that are not works of visual art (Ginsburg, 2012).

To extend the scope of rights and afford similar protections, the US law recognizes certain quasi-moral rights through other statutory enactments. For instance, Section 1202(b) of the Digital Millennium Copyright Act (DMCA) grants an analogous right to paternity. This provision prohibits the intentional removal or alteration of copyright management information (CMI) where such conduct facilitates or results in copyright infringement. The CMI provision, therefore, in this context, functions similarly to the right of paternity (Ginsburg, 2012). The CMI provision requires special consideration since the principal copyright exception in the US copyright law, such as fair use, does not extend to claims for CMI removal under DMCA (Bersh, 2025). The principal distinction between the CMI removal clause and the moral right to paternity could be summarized as follows;

Table 1: Comparison of moral right to attribution and CMI removal under Section 1202 (b) of DMCA

Attribution Right	Removal of CMI
The right to be credited	Prohibition on removing the author's copyright information
The author has the right to demand recognition	The author must show removal or alteration occurred
Right exists even if no metadata ever existed	Requires CMI to exist first
Proof of infringement is not required	Removal of CMI results in copyright infringement

So far, no cases involving violations of moral rights under VARA in terms of Generative AI training have been filed in any court (Matulionyte, 2023). Despite the absence of

specific cases under VARA, some Plaintiffs have taken recourse to filing DMCA lawsuits against Generative AI companies for the removal of CMI from their works. One of the earliest cases involving this right was initiated by lawyer and programmer Matthew Butterick against GitHub, Microsoft, and OpenAI. The main argument was that the plaintiffs had uploaded their source code to GitHub under open-source licenses. A core condition of these open-source licenses is that when the code on GitHub is used for any purpose, the user must provide attribution to the original author whenever the code is used (Kahveci, 2023).

GitHub Copilot is a subscription-based tool that helps users generate code snippets and identify bugs. The plaintiffs claimed that the defendants used open-source code from sites such as GitHub to train their Model, GitHub Copilot, which is based on OpenAI's Codex. They argued that the defendants failed to provide proper attribution, violated the terms of open-source licenses, and failed to adhere to the open-source community's standards. They also contended that, although the code was publicly available, using it to train AI models like Codex did not meet licensing requirements for attribution. The plaintiffs' claims focused mainly on violations involving the removal or alteration of CMI. Additional cases against GitHub and similar companies have also been filed under Section 1202 of the DMCA, which allege that the defendants removed CMI during the training of their Generative AI Model (Kahveci, 2023).

In the case *supra*, however, the plaintiff was unable to substantiate his claim before the court (Deeplearning.AI, 2024). It is therefore cardinal to understand these claims against the training process. Within the generative AI supply chain, the CMI removal provisions are said to be most prominently pressed into service at the cleaning and pre-processing stage, where data is deduplicated and filtered, and metadata is stripped from copyright works. The CMI under the DMCA includes the author's name, copyright notice, title of the work, terms and conditions of licensing, and other identifiers embedded in the metadata (De Kroon, 2000). Although copying relevant to copyright law occurs during the data acquisition stage, a claim for removal of metadata and copyright management information could be said to arise during the filtration stage, before tokenization, since the tokenization stage does not, by itself, involve CMI removal (Bershteyn, 2025).

The fine-tuning stage may also be relevant to CMI removal claims, as it may involve removing CMI during the cleaning and pre-processing of large corpora of books, journals, and other databases. What makes this paradoxical for generative AI service providers is that removing CMI is an essential part of the training process. The developers routinely strip CMI to filter and train their models. To succeed in a claim concerning CMI removal during Generative AI training, the plaintiffs need to prove the 'double scienter' requirement. The first part of this requires proving that the individual knowingly removed or provided false CMI. For example, it is enough if the defendant knew the CMI had already been removed. The second part requires that the defendant knew, or reasonably should have known, that distributing material with altered or missing CMI would facilitate infringement by inducing, enabling, facilitating, or concealing the act (Keenan, 2022).

This does not require proof of actual knowledge. The law also does not require proof that the defendant was aware, or should have been aware, of specific downstream infringements by others; it is sufficient if the CMI was removed, and such removal resulted in copyright infringement (Keenan, 2022). Another requirement under the DMCA definition of CMI is that the infringing work must be a 'copy' of a work. The

courts, however, have been split over the nature of this copy. Some courts only require that output be similar to the one from which CMI was removed, whereas others have placed emphasis on a much more stringent 'identity requirement'. This split has also translated into the courts' approaches to interpreting the application of DMCA claims against Generative AI companies (Bersh, 2025).

For instance, in the Northern District of California, three judges have reached different conclusions regarding how the CMI provisions apply to the use of copyrighted works for LLM training. One judge has held that the distribution of outputs by a large language model without CMI does not meet the criteria for a DMCA claim, where the outputs are not identical copies but merely derivative works. In contrast, another judge found that a motion to dismiss survived where the work in question was similar to the plaintiff's copyrighted source code, instead of requiring absolute identity. Based on these two judgments, the third court was divided in its authority (Bersh, 2025). Essentially, this similarity requirement could pose a challenge for Generative AI service providers by exposing them to a greater liability.

The only practical way for an output to resemble a copyrighted work in order to fall within Section 1202 would be to trace the output back to the specific training data that contributed to the output. This may involve linking AI-generated content to the work used within the training data from which it was created, which could be extremely difficult for AI systems to achieve in practice. The attribution in this scenario could be more problematic for code, such as the GitHub litigation discussed above. Since code is a highly constrained form of expression, there are only a limited number of ways to express certain computational ideas in code. As a result, similar to much of the data used to train large language models, violations of programming code governing the removal of CMI could be hard for plaintiffs to prove. This functional character of the code may also limit its copyright protection under the merger doctrine or the idea-expression dichotomy (Bersh, 2025).

However, the 1202 liability does not apply the copyrightability standard to impose liability; it only requires either similarity or identity. The copyrightability may therefore not be a necessary hurdle for rightsholders to prove culpability of Model providers (Samuelson et al., 2026). Therefore, although model providers have so far evaded liability under the DMCA due to unsettled jurisprudence on the similarity and identity standards, liability could nevertheless arise in future cases, potentially resulting in damages under the DMCA. It is only because moral rights of attribution and integrity are not applied to all forms of rights in the US, and rights holders have found it difficult to substantiate successful claims.

Under personality theory, the act of stripping CMI during the pre-processing and cleaning stages of generative AI training could be considered not only a technical act but also a violation of personality. We may therefore argue that the CMI embedded in a work that includes their name and other forms of identifiers could be considered part of their personality. However, a significant fallacy in this argument is that these provisions within the DMCA are economic in nature and have little to do with personhood aspirations, unlike the moral right to attribution. Perhaps a countervailing argument here is that US copyright law is normatively oriented towards achieving utilitarian objectives. The reason personhood claims would be frail with regard to CMI provisions is this orientation. This could also be reflected in the overall structure of moral rights and in the limitation of their application to works of visual art.

It would appear that, in jurisdictions that explicitly provide for moral rights protections, the position of implications for Generative AI companies may materially differ. The next section provides an overview of these concerns under the United Kingdom's moral rights framework.

4.5. Moral Rights and AI Training Under United Kingdom Law

Unlike the United States, the United Kingdom's copyright law offers stronger moral rights protections for authors. This could be reflected in the fact that, unlike the traditional two rights provided in Article 6bis, the category of protections afforded under UK law extends to four areas. These include the right of attribution, integrity, protection against false authorship and right to privacy for works created for private consumption (Thornton et al., 2025).

Though we may consider moral rights protections in the UK to be greater than those in the US, it may nevertheless be argued that these broad protections have certain limitations. A critical limiting factor in this regard is the waiver provision in section 87(2) of the Copyright, Designs and Patents Act 1988, which allows rights to be waived voluntarily. This limitation would imply that the waiver places these rights in parallel with economic rights by providing a mechanism for alienation. This may also create issues regarding non-compliance with Article 6bis of the Berne Convention. Nevertheless, any such claims of non-compliance with international law have not yet come into vogue (Bialowas, 2015). In addition to the waiver, each of these moral rights under UK copyright law comes with limitations and exceptions that limit their scope (Brown-Pedersen, 2018).

From a normative standpoint, these waiver provisions and exceptions also run contrary to the foundations of personality theory. The personality theory framework envisages that the emotional bond between the author and their work is intertwined and inseparable. The alienability of these rights, along with exceptions, would, therefore, have the effect of going against the tenets of personality theory. More critically, the nature of the waiver and exceptions may be justified in Lockean Labour tradition, which regards these rights as 'property' in an economic sense, and therefore makes the case for alienability (Craig, 2002). Such an argument, however, would not stand to reason under personality theory. Although a countervailing argument may be made here to the effect that the nature of the waiver is 'voluntary,' which may make the case for its consonance with the personality theory.

4.5.1. Attribution, Integrity and AI Training

The first right provided under UK law is the right of attribution, which guarantees that the author of a work or the director of a film is credited for the creative expression (Mccartney, 1990). This right is contained in Section 78 of the CDPA, the enforcement of which requires express assertion by the author or director. As a matter of fact, an assertion is a mandatory requirement, which, if not complied with, results in loss of paternity protections for the author or director. This assertion can either be made in the form of a written agreement or through any other instrument, provided that the assertion has to be made in writing (Riefa, 2008).

Regarding the right of paternity, the authors could argue that they are not being credited when AI generates an output that contains creative expression derived from their works

used as training data (Spinellis, 2025). This may apply to both the AI model itself, since it is trained extensively on copyrighted works by rights holders, and to the outputs the AI generates from corpora of rights holders' works in the training data set. As discussed above, the attribution problem in AI is an acute issue, as the data used to train the resulting model is copyrighted. Accordingly, the author would have the right to claim authorship in relation to both the outputs and the resulting trained model, on the basis that the trained model is derived from the author's works.

The CDPA also incorporates the right of integrity, which enables the author or director of a work to oppose any treatment they deem derogatory or damaging. This may include adaptations or modifications that could be seen as mutilation, distortion, or anything that unfairly prejudices their reputation (Thornton et al., 2025). We may note that, since its incorporation into the CDPA, this right has been invoked only rarely in practice. In adjudicating cases concerning integrity, UK courts have generally adopted a two-factor test to determine whether an infringement has occurred. The first element of this test requires that the treatment of the work must be a distortion or mutilation, and that such treatment must also be prejudicial to the honour or reputation of the author (Bialowas, 2015).

It follows that not all distortions or mutilations are actionable per se; under UK law, the harm or prejudice is a necessary element, unlike in some jurisdictions discussed above, which do not require harm. In regard to the application of this right to the training process, some scholars have pointed out that the author of a work may retain the right to object to the training process if they consider it prejudicial to the integrity of their work (Benhamou & Andrijevic, 2022). The evidentiary challenges with asserting this right would be discussed in the subsequent part of this paper.

4.5.2. Misattribution and AI Hallucinations

The third right under UK law is the right to restrain others from falsely attributing the work to someone who did not engage in its authorship. (Thornton et al., 2025). We may infer that this is a sister right to attribution in that the normative goal of this right is to ensure attribution by protecting those to whom false authorship is attributed. Owing to the extensive nature of protections for moral rights, there may be instances in which this right is also implicated by the training process.

As we know, there is a recurring issue with Generative AI Systems in attributing non-existent works or wrongly assigning them to individuals who did not contribute to their authorship. Multiple studies have demonstrated that Generative AI can occasionally generate outputs falsely credited to the wrong author (Spinellis, 2025). Accordingly, the UK rights holder would have the right to object to such misattribution and to require generative AI companies to ensure that such attribution does not appear in their outputs.

However, it would be onerous to assert this right in practice since the outputs could be a private matter between a user and a generative AI system. Assertion of such a right would require that any such misattribution be first communicated to the public, which comes to the attention of the author (Copyright Design & Patents Act, 1988). Secondly, since the scope of this paper centres on AI inputs rather than outputs, such exploration therefore falls outside the scope of this study.

Regarding the fourth moral right, the right to privacy, we could infer that it would not be implicated during AI training. This right protects authors and directors against public disclosure of their works produced for private consumption. It is appropriate to note that since AI training is largely conducted on publicly available data, the question of pressing this right into service does not arise.

4.5.3. Issues in Asserting Moral Rights against AI training under UK law

The principal issue with asserting moral rights under UK law is that, at present, there is no judicial precedent for applying moral rights to AI training. One of the infamous cases decided in the UK regarding generative AI training and copyright issues was the Getty Images case. However, the central focus in the Getty Images case was on secondary liability and the violation of economic rights (Lee, 2026). Precisely, it also left the moral rights implications of generative AI training under UK copyright law in a lurch. In addition to this lack of clarity in judicial application, there is also a lack of scholarly discourse addressing how moral rights under the Copyright, Designs and Patents Act apply to the various stages of the AI training process.

The policy focus on Generative AI training and copyright in the UK was reflected in the UK's consultations on Copyright and AI. Even within these consultations, little attention was accorded to the issues arising vis-à-vis integrity and attribution, or privacy and protection against misattribution. Instead, the principal focus of the consultations has been on economic rights, licensing, and transparency obligations rather than directly on moral rights (Glenster et al., 2025). Since the copyright framework in Pakistan provides somewhat similar moral rights protections, the next section will explore moral rights concerns in the training process under Pakistani copyright law.

4.6. Position Under Pakistani Law

The principal statute governing copyrights is contained in the Copyright Ordinance of 1962. This law also recognizes moral rights within its legislative scheme. Although they are not as extensive as UK copyright law, which provides greater protection for moral rights than those required under international law. The Ordinance provides the minimum level of protection required by Article 6bis of the Berne Convention. These rights are outlined in Section 62 of the Ordinance and are referred to as the 'special rights'. They include the attribution right, which includes the right of the author to be recognized for their creative expression, and the integrity right, which prevents destruction, mutilation, or alteration of the work that could damage the author's reputation or honour (Copyright Ordinance, 1962).

A special feature of these rights is that the alienability of economic rights does not affect the status of special rights. The provision states that, "Notwithstanding that the author of a work may have assigned or relinquished the copyright in the work," which implies that, regardless of exhaustion or assignment of copyright, the special rights would continue to apply. In terms of enforceability, the remedies for copyright infringement are set out in Section 60. The provision stipulates that where rights in any work have been infringed, the rights holder is entitled to obtain injunctive relief or claim damages or an account of profits in respect of such infringement (Copyright Ordinance, 1962).

The injunctive relief provided under the Ordinance includes both temporary injunctions to restrain a person from continuing the infringing act and permanent injunctions to

permanently restrain a person from committing the infringing act. However, it is worth considering that special rights do not rely on separate remedies envisaged in section 60 for infringement. Instead, section 62 provides its own remedy for violations of integrity and authorship violations. The only remedy for an authorship claim is injunctive relief to claim attribution of the work. Whereas for integrity rights violation, it provides that the author “shall have the right to restrain, or claim damages in respect of” the prohibited conduct (Copyright Ordinance, 1962).

The mechanism for filing a case for the violation of moral rights under the Copyright Ordinance was available in the district courts with appropriate jurisdiction. However, following the enactment of the Intellectual Property Organization Act of 2012, the relevant IP Tribunals were established in Pakistan to adjudicate IP disputes, including copyright violations (Shah & Haroon, 2019). Henceforth, the jurisdiction to file a claim for the violation of authorship or integrity rights is vested within these IP Tribunals. In order to advance a claim for infringement of moral rights, a plaintiff bears the burden of proving the subsistence of copyright. In this regard, it is not necessary for the copyright to be registered. The court in *Messers Ferozesons (Pvt) Ltd v Dr Col (Retd) K.U. Qureshi* held that the registration of copyright is not mandatory; however, it may be regarded as evidence of the subsistence of copyright (Anchan Law, 2021).

In a claim concerning the violation of the right of attribution, the plaintiff must prove that they possess a valid copyright in the work and that the derivative use of their work failed to attribute or credit the plaintiff as the author. Similar to the UK copyright law, in a claim concerning the violation of the right to integrity, the provision may be understood as comprising a two-factor test. First, the plaintiff must establish that the work was subjected to distortion or mutilation, and that such distortion or mutilation unfairly prejudiced the honour or reputation of the author.

The only notable authority on moral rights in Pakistan is the ‘Riffat Saraj case’ adjudicated before the Lahore High Court. The dispute in this case primarily centred on the attribution of a drama based on a novel authored by Riffat Saraj. The Plaintiff argued that the drama serial was created from her script and that she was not credited as the author in the drama's acknowledgements. The production company argued that, since it had purchased the script rights from another entity to which the author had originally assigned these rights, it was under no obligation to credit the Plaintiff. The court ruled against the defendants and held that even after the transfer of economic rights, moral rights would continue to subsist, and that the Plaintiff retains an inalienable right to be credited as the author of the script (Anon, 2009).

As regards their application to Generative AI training, attribution and integrity-related issues could also arise under the Copyright Ordinance, as these issues apply more generally under UK law. As already noted, under the right of paternity, authors may compel generative AI models trained on Pakistani works to ensure attribution. For instance, if Pakistani courts determine that the right of attribution applies to works used in AI training, compliance could be achieved by providing links, the author's name, or other sufficient information to attribute the output to the author. Failing to do so may cause authors to miss attribution opportunities, potentially resulting in economic losses or emotional damage. One mitigation strategy would be to configure Generative AI systems to include citations, the author's name, or similar details to ensure the relevant author can be identified (Kahveci, 2023).

Another key consideration under the Ordinance's version of attribution right is that, unlike UK copyright law, attribution does not require asserting these rights to be enforceable. Thus, we may note that, since there is no requirement for assertions to be in writing, rights holders would be better placed under Pakistani law to enforce their rights against generative AI training. Under the US position, since moral rights are not recognized for works other than visual arts, rights holders have sought refuge in the DMCA's CMI removal provisions.

The attribution right here is also distinguishable from the CMI clause in that the criteria here do not require the right holders to prove the two-scienter requirement for copying and infringement, as the rights holder only needs to prove that their work was used in generative AI training and that the work was not attributed to the rights holder. Neither is there any identity or similarity condition required to prove infringement of the attribution right. Due to the broad nature of attribution rights, rights holders would have a greater opportunity to assert the violation of attribution against the generative AI training process than under UK or US law.

Also, the attribution right is distinguishable from the CMI removal provisions based on the factors that lead to their infringement. For instance, the rightsholders can assert paternity rights against Generative AI companies if they fail to provide attribution. Conversely, we may consider an opportunity to comply with the attribution requirements if the systems can trace the origin of individual works and attribute them to their original authors. However, if a right holder can trace attribution within an AI system, this may instead establish liability against the service provider under the DMCA. Such tracing could serve as evidence that CMI was removed or stripped from the original work during training. In this sense, the attribution traces would not demonstrate compliance with the DMCA but would instead support a claim that the developer infringed the statute. However, it was also considered that this would be difficult to achieve in practice, since AI does not retain copies or duplicate works in the system and merely creates structures within its neural networks (Smit, 2026).

This also complements the misattribution problem, in which systems attribute works to those who did not author them. Under UK law, this sister right to paternity is recognized and may be asserted against those who publish works generated by AI with wrong attribution. Under the Pakistani Copyright Ordinance, however, there is no moral right against misattribution; such wrongful assertion of authorship is, however, culpable under Pakistan's criminal copyright provisions. For instance, under section 70 of the Ordinance, 1962, any publication or reproduction of a work that engages in false authorship or attribution, if proven, is liable to imprisonment of up to two years (Copyright Ordinance, 1962). Although it is noteworthy that this provision has not been pressed into service. This may partly be due to the reason that the scope of application is narrow, and requires any publication or reproduction that comes to the knowledge of the rightsholder.

In terms of integrity, most issues arise primarily during the training stage. Some scholars argue that the training process involves mutilating or distorting copyrighted works, which allows authors to invoke their moral right of integrity (Benhamou & Andrijevic, 2022). By inference, it can be assumed that Pakistani authors would also have the right to oppose any distortion, mutilation, or adaptation of their works. If we apply the two-factor test from UK moral rights jurisprudence, the main challenge in advancing this argument is that courts must interpret the training process as a

‘distortion or mutilation’, and that such activity must also be considered harmful to the author’s honour or reputation to invoke this special right. (Copyright Ordinance, 1962). As previously mentioned, the scope to invoke the right of integrity against the AI training process is very narrow (Benhamou & Andrijevic, 2022). Similarly, it would be difficult to draw that courts would likely view AI training as harmful to an author’s honour or reputation without an onerous evidentiary burden on the plaintiff. The only possible exception might be if a model trained for unethical purposes is employed to generate outputs that harm an author’s integrity or respect. In those instances, authors could invoke their right of integrity to prevent the system from producing such distortions through a temporary or permanent injunction. It would, however, intuitively appear that, without clear judicial guidelines or established jurisprudence, it remains uncertain whether Pakistani courts would be drawn to such a claim.

Several additional considerations come into play in applying Section 62 of the Copyright Ordinance 1962 to generative AI training. Most notably, the scope of Section 62 regarding the circumstances that trigger these rights is unclear. This raises questions about whether attribution and integrity rights are triggered only upon reproduction during output generation, or whether they may also apply to other stages of generative AI, such as filtering, training, and fine-tuning. Another challenge in asserting these rights is the evidentiary difficulties posed by the AI training process itself. This makes it onerous for authors to prove moral rights violations and enforce them in practice. Regardless of how frail the argument for applying attribution and integrity rights to generative AI training may be, these systems could be held liable if rights holders demonstrate a violation to the court’s satisfaction.

From a preliminary assessment, it can also be noted that Pakistan’s Copyright Ordinance, like UK copyright law, leans heavily towards the aspirations of personality theory. In certain instances, such as the waiver of rights, the protections afforded under the Ordinance even exceed those under UK copyright law. Thus, if rights holders can substantiate a lack of attribution, they would have a strong case for success in claims concerning moral rights violations. This may stem from the idea that failing to attribute rights to their holders violates personhood, as it deprives them of aspects of their personality. Similarly, under integrity-related concerns, since moral rights to integrity seek to protect the author’s personality, any violation of such a right through distortion or mutilation that harms the author would, in turn, violate the author’s personality.

At the same time, the fragility of advancing these arguments against AI training also warrants further attention. The personality theory may suggest that the current corpus of moral rights may be insufficient and that additional rights may be needed to provide stronger protection for authors’ personhood interests in the AI era. Academic discussions have therefore suggested expanding moral rights to address these issues. Yuvaraj (2025) notes that although AI training may potentially infringe moral rights, relying solely on existing laws might not always be sufficient to substantiate a successful claim. To offer stronger protections for creators and copyright holders, new moral rights against unauthorized use in AI training and machine learning need to be created. These rights should also include transparency obligations, such as properly attributing works used in training and enabling copyright owners to withdraw consent if it was accorded earlier.

5. Conclusion

The study conducted an in-depth examination of moral rights issues that arise at various stages of generative AI training, including data collection, filtering, pre-processing, and fine-tuning. It is noted that these moral rights raise distinct concerns from the economic rights issues related to the process. The research indicates that concerns about integrity can arise under both UK and Pakistani copyright law, specifically as fine-tuning and training may be considered akin to distortion or mutilation. However, the study also points out that claims based on integrity face significant evidentiary hurdles. Rights holders must prove that the use constitutes distortion or mutilation and that such conduct damages the author's honor or reputation. The analysis shows that integrity rights under Pakistani and UK copyright law raise similar issues in the context of generative AI. Although not specifically an input issue, the integrity argument may be advanced against systems trained on authors' works that generate distortions that may unfairly prejudice the author in their outputs. In contrast, the integrity rights protections under US law are considerably different, as they are limited to works of visual art.

The principal concern in advancing paternity rights against generative AI training under the copyright laws of the UK and Pakistan is the lack of attribution to the authors whose creative expression is embedded in AI systems and subsequently used to generate outputs. This attribution problem can be overcome by ensuring the systems are trained to locate and attribute information originating from the author. At the same time, the research acknowledges the complexity of advancing such claims, as AI training does not make copies in the system but only extracts statistical patterns and relationships by creating structures within the neural network. In this regard, it would be difficult to trace the individual works within the system. This may lead to a misattribution issue where works are attributed to those who did not engage in their authorship. It is problematic in the sense that UK copyright law protects against such misattribution as a distinct moral right. Research also indicates that Pakistani criminal copyright provisions offer similar protection against misattribution; however, their scope is uncertain, as these rights have not yet been invoked.

Since US copyright law does not recognize a moral right of attribution, this study explored a similar remedy under Section 1202(b) of the DMCA for the removal of copyright management information (CMI). To succeed in such claims, plaintiffs need to satisfy a two-scienter requirement that requires proving that CMI was removed and that the removal could facilitate or conceal copyright infringement. The study also highlighted the differing interpretations among US courts regarding the meaning of 'copy' in this two-scienter test. Some courts require a stringent "identity," whereas others apply a less strict similarity standard. The findings indicate that generative AI companies might face increased liability risks if courts adopt the similarity approach. This position on attribution can be contrasted with Pakistani copyright law, which requires only proof of the absence of attribution, without imposing the similarly burdensome evidentiary thresholds of the CMI removal provisions in the DMCA.

Finally, the study examined the personhood considerations within moral rights claims against generative AI training across these jurisdictions. The research found that Pakistani copyright law offers relatively broader Personhood protections as it does not limit the scope or applicability of these rights. In contrast, UK law imposes various statutory limitations and exceptions on moral rights, whereas US law restricts moral

rights protections to works of visual art only. Similarly, unlike in Pakistan, the limitations in the US reflect the utilitarian origins of its copyright law, which could explain the deviation from personality theory. Simultaneously, the study recognises the limitations associated with advancing such claims under the Pakistani Copyright Ordinance. Owing to these limitations with the existing structure of moral rights, there may be a need to recognize additional rights against the training process so as to offer better protection for 'personhood' interests of authors.

Ethics Approval and Consent to Participate

The researchers used the research ethics provided by the Research Ethics Committee of Universiti Kebangsaan Malaysia (RECUKM). As this study involved doctrinal research, secondary data and literature-based analysis, no human participants were directly involved, and therefore, no informed consent was required.

Acknowledgement

The authors would like to thank the Faculty of Law, Universiti Kebangsaan Malaysia for funding this research.

Funding

This study received funding from Grant UU-2024-014 Geran Kompetitif, Faculty of Law, Universiti Kebangsaan Malaysia.

Conflict of Interest

The authors reported no conflicts of interest for this work and declare that there is no potential conflict of interest with respect to the research, authorship, or publication of this article.

References

- Abdul, S. S., Muhammad, Z. S., Muhammad, H. S., & Sadia, F. (2024). An Evaluate the Legal Gaps Regarding the Artificial Intelligence and Copyright Infringement in The Context of Pakistan. *Indus Journal of Social Sciences, Ученые: Ali Institute of Research & Skills Development*, 2(2), 592-601. <https://induspublishers.com/index.php/IJSS/article/view/419>
- Alabi, M. (2024). Generative AI and its Applications in Creative Industries. https://www.researchgate.net/publication/385508903_Generative_AI_and_its_Applications_in_Creative_Industries
- Anchan Law. (2021). Copyrights and the law on protection of copyrights in Pakistan. <https://anchanlaw.com/copy-rights-and-the-law-on-protection-of-copy-rights-in-pakistan/>
- Anisuzzaman, D. M., Malins, J. G., Friedman, P. A., & Attia, Z. I. (2025). Fine-tuning large language models for specialized use cases. *Mayo Clinic Proceedings: Digital Health*, 3(1), 100184. 100184. <https://doi.org/10.1016/j.mcpdig.2024.11.005>
- Anon. (2009). Mrs. Riffat Saraj v. Eye Television Network (Pvt.) Ltd., *Corporate Law Decisions*, 2009, 1133 (Lahore High Court).

- Arfat, Y., Hussain, N., & Idrees, R. Q. (2026). The Doctrine of Fair Dealing in Copyright Law: Balancing Protection and Public Interest. *Journal for Current Sign*, 4(1), 647-658. <http://currentsignreview.com/index.php/JCS/article/view/572>
- Benhamou, Y., & Andrijevic, A. (2022). The protection of AI-generated pictures (photograph and painting) under copyright law. In *Research handbook on intellectual property and artificial intelligence* (pp. 198-217). Edward Elgar Publishing. <https://doi.org/10.4337/9781800881907.00016>
- Bersh, L. (2026). Beyond Infringement: Rethinking DMCA Sec. 1202 for Generative AI. *Stanford Law Review*, 78, 667. <https://review.law.stanford.edu/wp-content/uploads/sites/3/2026/03/Bersh-78-Stan.-L.-Rev.-667.pdf>
- Bialowas, A. (2015). Right of Integrity: Misleading, Irrelevant and Disappointing. *QMLJ*, 6, 109-127. <https://www.qmul.ac.uk/law/research/journals/the-queen-mary-law-journal/media/law/docs/research/6QMLJ109.pdf>
- Bird, R. C., & Ponte, L. M. (2006). Protecting Moral Rights in the United States and the United Kingdom: Challenges and Opportunities Under the UK's New Performances Regulations. *BU Int'l LJ*, 24, 213-282. <https://www.bu.edu/law/journals-archive/international/volume24n2/documents/213-282.pdf>
- Borghi, M., Khan, B., Arnaudo, A., Raso, R., Ricolfi, M., Vetro, A., & Coppola, R. (2025). The development of generative artificial intelligence from a copyright perspective. <https://dx.doi.org/10.2814/3893780>
- Brown-Pedersen, J. (2018). The Inadequacy of UK Moral Rights Protection: A Comparative Study on the Waivability of Rights and Recontextualisation of Works in Copyright and Droit d'Auteurs Systems. *LSE LR*, 3, 115-128. [10.21953/lse.ir8b0i90x2l6](https://doi.org/10.21953/lse.ir8b0i90x2l6)
- Buick, A. (2025). Copyright and AI training data—transparency to the rescue?. *Journal of Intellectual Property Law and Practice*, 20(3), 182-192. <https://doi.org/10.1093/jiplp/jpae102>
- Cooper, A. F., & Grimmelmann, J. (2025). The files are in the computer: on copyright, memorization, and generative AI. *Chicago-Kent Law Review*, 100, 141-219. <https://scholarship.kentlaw.iit.edu/cklawreview/vol100/iss1/9>
- Copyright Designs and Patents Act 1988, c. 48.
- Copyright Ordinance, 1962 (Ordinance XXXIV of 1962).
- Craig, C. J. (2002). Locke, labour and limiting the author's right: A warning against a Lockean approach to copyright law. *Queen's LJ*, 28, 1. https://digitalcommons.osgoode.yorku.ca/scholarly_works/1191/
- Damich, E. J. (1988). The Right of Personality: A Common-Law Basis for the Protection of the Moral Rights of Authors. *Ga. L. Rev.*, 23, 1.
- De Kroon, A. M. (2000). Protection of copyright management Information. *Copyright and Electronic Commerce. Legal Aspects of Electronic Copyright Management*. Hugenholtz, P. Bernt (ed.) Kluwer Academic Publishers, 229-265.
- DeepLearning.AI. (2024). Copyright Claim Fails in Github Case, Judge Dismisses Key Arguments in Ai Copyright Lawsuit against Github, Microsoft, and Openai. Retrieved from <https://www.deeplearning.ai/the-batch/judge-dismisses-key-arguments-in-ai-copyright-lawsuit-against-github-microsoft-and-openai>
- Dobinson, I., & Johns, F. (2017). Legal Research as Qualitative. *Research methods for law*, 18. <https://doi.org/10.1515/9781474404259-005>
- Stober, S., & Dornis, T. W. (2025). Generative AI training and copyright law. *arXiv preprint arXiv:2502.15858*. <https://arxiv.org/pdf/2502.15858>
- Dworkin, G. (1994). The moral right of the author: moral rights and the common law countries. *Columbia-VLA Journal of Law & the Arts*, 19, 229.

- Fenwick, M., & Jurcys, P. (2023). Originality and the future of copyright in an age of generative AI. *Computer Law & Security Review*, 51, 105892. <https://doi.org/10.1016/j.clsr.2023.105892>
- Fernández-Molina, J. C., & Peis, E. (2001). The moral rights of authors in the age of digital information. *Journal of the American Society for Information Science and Technology*, 52(2), 109-117. [https://doi.org/10.1002/1097-4571\(2000\)9999:9999<::AID-ASI1060>3.0.CO;2-B](https://doi.org/10.1002/1097-4571(2000)9999:9999<::AID-ASI1060>3.0.CO;2-B)
- Fisher, W. (2001). Theories of intellectual property.
- Geller, P. (1985). Comments on Possible US Compliance with Article 6bis of the Berne Convention. *Columbia-VLA Journal of Law & the Arts*, 10, 665.
- Gervais, D. J. (2021). AI derivatives: the application to the derivative work right to literary and artistic productions of AI machines. *Seton Hall Law Review*, 52, 1111-1136. <http://dx.doi.org/10.2139/ssrn.4022665>
- Ginsburg, J. C. (2012). Moral Rights in the US Still in Need of a Guardian Ad Litem. *Cardozo Arts & Entertainment Law Journal*, 30, 73-90. https://scholarship.law.columbia.edu/cgi/viewcontent.cgi?article=2730&context=faculty_scholarship
- Glenster, A. K., Hampton, L., Neff, G., & Lacy, T. (2025). AI, copyright, and productivity in the creative industries. Retrieved from <https://www.mctd.ac.uk/wp-content/uploads/2025/02/MCTD-AICopyright-CreativeIndustries-Report-WEB.pdf>
- Hong, R., Hutson, J., Agnew, W., Huda, I., Kohno, T., & Morgenstern, J. (2026, March). A common pool of privacy problems: Legal and technical lessons from a large-scale web-scraped machine learning dataset. In *Proceedings of the Symposium on Computer Science and Law*, 1-14. <https://doi.org/10.1145/3788646.3789521>
- James, E. P. S. (1991). *Copinger and Skone James on copyright: including international copyright with the statutes, orders conventions and agreements thereto relating and precedents and court forms also related forms of protection*. Sweet & Maxwell.
- Kahveci, Z. Ü. (2023). Attribution problem of generative AI: a view from US copyright law. *Journal of Intellectual Property Law and Practice*, 18(11), 796-807. <https://doi.org/10.1093/jiplp/jpad076>
- Keenan, M. (2022). Copyright Management Information (CMI) as a Tool to Protect Indigenous Cultural Works. *NYU J. Intell. Prop. & Ent. L.*, 12, 413.
- Khan, A. N., Ali, B., & Nawaz, F. (2024). Developing a Fair Use Framework for AI-Generated Content in Pakistani Copyright Law: A Doctrinal Legal Analysis. *Journal of Peace, Development and Communication*, 8(02).
- Khan, M. A., Qureshi, A. N., & Khan, M. Z. (2026). Methodological foundations of legal research: A critical examination of doctrinal, comparative, and socio-legal approaches. *ASSAJ*, 5(2), 106-113. <https://assajournal.com/index.php/36/article/view/1595>
- Lee, K., Cooper, A. F., & Grimmelmann, J. (2023). Talkin'bout ai generation: Copyright and the generative-ai supply chain. *arXiv preprint arXiv:2309.08133*. <https://doi.org/10.48550/arXiv.2309.08133>
- Lee, Y. H. (2026). United Kingdom Copyright Decisions 2025: YH Lee. *IIC-International Review of Intellectual Property and Competition Law*, 57(3), 524-535. <https://doi.org/10.1007/s40319-026-01705-w>
- Liemer, S. P. (2011). On the origins of le Droit Moral: how non-economic rights came to be protected in French IP law. *J. Intell. Prop. L.*, 19, 65. <https://digitalcommons.law.uga.edu/jipl/vol19/iss1/4>
- Lucchi, N. (2025). *Generative AI and copyright: Training, creation, regulation*. European Parliament.

- Lucchi, N., Dornis, T. W., & Ginsburg, J. C. (2026). GEMA v. OpenAI (Munich I Regional Court, 2025): Doctrinal, Comparative, and International Perspectives on Copyright and Generative AI. *OpenAI (Munich I Regional Court, 2025): Doctrinal, Comparative, and International Perspectives on Copyright and Generative AI (May 01, 2026). Columbia Public Law Research Paper.*
- Majeed, N., Hilal, A., & Khan, A. N. (2023). Doctrinal research in law: Meaning, scope and methodology. *Bulletin of Business and Economics (BBE)*, 12(4), 559-563. <https://doi.org/10.61506/01.00167>
- Maria, I., & Fakrulloh, Z. A. (2025). Case Study of Studio Ghibli VS Open AI for the Proposed Revision of Indonesia Law Number 28 of 2014 Concerning Copyright. *Jurnal Syntax Transformation*, 6(7), 204-212. <https://doi.org/10.46799/jst.v6i7.1087>
- Matulionyte, R. (2023). Can AI infringe moral rights of authors and should we do anything about it? An Australian perspective. *Law, Innovation and Technology*, 15(1), 124-147. <https://doi.org/10.1080/17579961.2023.2184138>
- Matulionyte, R. (2025). Reconceptualising the Reproduction Right in the Age of AI. *IIC-International Review of Intellectual Property and Competition Law*, 1-36. <https://doi.org/10.1007/s40319-025-01653-x>
- McCartney, S. J. (1990). Moral Rights Under the United Kingdom's Copyright, Designs and Patents Act of 1988. *Colum.-VLA JL & Arts*, 15, 205.
- Moore, A. D. (2008). Personality-based, rule-utilitarian, and lockean justifications of intellectual property. *The handbook of information and computer ethics*, 105. <https://doi.org/10.1002/9780470281819.ch5>
- Mushtaq, S. A., Baig, K., Bukhari, S. W. R., & Ahmad, W. (2024). Does Pakistan's copyright and antitrust law protect creators of AI-Generated content? A comparative study with European Union jurisdictions. *Pakistan Journal of Criminal Justice*, 4(1), 55-76. <https://doi.org/10.62585/pjcj.v4i1.51>
- Nielsen, D. L. (2025). The Protection of "Style" Under Copyright and its Application to Generative Artificial Intelligence. *Emory Law Journal*, 74(4), 1009. <https://scholarlycommons.law.emory.edu/elj/vol74/iss4/4>
- Nwabachili, C. O., & Nwabachili, C. C. (2015). Authorship and ownership of copyright: A critical review. *JL Pol'y & Globalization*, 34, 1.
- Quintais, J. P. (2025). Generative AI, copyright and the AI Act. *Computer Law & Security Review*, 56, 106-107. <https://doi.org/10.1016/j.clsr.2025.106107>
- Rettigheds Alliancen. (2025). Report on Pirated Content Used in the Training of Generative AI. Retrieved from <https://rettighedsalliancen.dk/wp-content/uploads/2025/03/Report-on-pirated-content-used-in-training-of-AI.pdf>
- Riefa, C. (2008). Know your copyright from wrong: A guide to UK Copyright law. Available at SSRN 1355904. <http://dx.doi.org/10.2139/ssrn.1355904>
- Rimmer, M. (2026). Night at the Artificial Museum: Copyright Law and Artificial Intelligence. *Culture Unbound: Journal of Current Cultural Research*, 18(1), 151-210. <https://doi.org/10.3384/cu.5601>
- Rosati, E. (2025). Infringing AI: Liability for AI-generated outputs under international, EU, and UK copyright law. *European Journal of Risk Regulation*, 16(2), 603-627. <https://doi.org/10.1017/err.2024.72>
- Sag, M. (2023). Fairness and fair use in generative AI. *Fordham Law Review*, 92, 1887. <https://ir.lawnet.fordham.edu/flr/vol92/iss5/7>
- Samuelson, P., Stallman, E., & Urban, J. M. (2026). Unbundling 17 Usc § 1202: Construing the Law's Scope in Light of Its Text, Purpose, and Remedies. *Santa Clara Law Review*, 66(3), 382. <https://digitalcommons.law.scu.edu/lawreview/vol66/iss3/1>

- Shah, A. K. & Haroon, H. (2019). At a Glance: Patent Enforcement Proceedings in Pakistan, Lexology. <https://www.lexology.com/library/detail.aspx?g=ebf63e10-271d-4b99-8e1b-8b191739ac19>
- Smith, C. Y. (2019). Creative Destruction: Copyright's Fair Use Doctrine and the Moral Right of Integrity. *Pepp. L. Rev.*, 47, 601. <https://digitalcommons.pepperdine.edu/plr/vol47/iss3/1>
- Somepalli, G., Singla, V., Goldblum, M., Geiping, J., & Goldstein, T. (2023). Diffusion art or digital forgery? investigating data replication in diffusion models. In *Proceedings of the IEEE/CVF conference on computer vision and pattern recognition*, 6048-6058. <https://doi.org/10.48550/arXiv.2212.03860>
- Spinellis, D. (2025). False authorship: an explorative case study around an AI-generated article published under my name. *Research Integrity and Peer Review*, 10(1), 8. <https://doi.org/10.1186/s41073-025-00165-z>
- Thornton, P., et al. 2025. Snapshot: The Scope of Copyright in United Kingdom. <https://www.lexology.com/library/detail.aspx?g=989c4e05-d114-4f30-a0d4-5af2ce70fcb0>.
- Travis, H. (2026). The Universal Lexicon: Generative AI Chatbots and Fair Use of Works in a Training Corpus. *Rev. of Litig*, 45, 60-114. <http://dx.doi.org/10.2139/ssrn.5512318>
- U.S. Copyright Office. (2025). *Copyright and artificial intelligence, part 3: Generative AI training* [Pre-publication version]. Retrieved from <https://www.copyright.gov/ai/Copyright-and-Artificial-Intelligence-Part-3-Generative-AI-Training-Report-Pre-Publication-Version.pdf>
- Van Hoecke, M. (2013). Methodology of comparative legal research. *Pravovedenie*, 121. <https://doi.org/10.5553/REM/.000010>
- Villalobos, P., Ho, A., Sevilla, J., Besiroglu, T., Heim, L., & Hobbhahn, M. (2022). Will we run out of data? Limits of LLM scaling based on human-generated data. *arXiv preprint arXiv:2211.04325*. <https://kumarvignesh.com/wp-content/uploads/2025/01/2211.04325v2.pdf>
- Yuvaraj, J. (2025). I Do Not Consent: Moral Rights and Machine Learning in Australian Copyright Law. <http://dx.doi.org/10.2139/ssrn.5576350>
- Zhang, J., & Guo, D. (2026). Judicial Approach to the Copyright Protection of Generative AI-Assisted Works in China: Review, Comparison and Reflection. *Comparison and Reflection*.