

Copyright Protection for AI-general Works: Dilemmas and Strategies

Yanfei Lei

School of Philosophy and Law and Politics, Shanghai Normal University, 100Haisi Road,
Shanghai, China

17701660080@163.com

Abstract. The rapid development of digital technology has led to the creation of numerous online works generated by Artificial Intelligence (AI) on various platforms. The emergence of these works brings about challenges to traditional copyright protection. Traditional copyright aims to protect the legitimate rights and interests that individuals enjoy over their intellectual achievements, while AI mainly relies on algorithms. Issues such as the ownership of rights, infringement determination, and the degree of protection of works all need to be addressed. This review explores the copyright disputes involved in works generated by AI, including compliance issues, ownership issues and infringement determination. Moreover, corresponding feasible countermeasures for such issues will be discussed. Under no circumstances should the creation of works be based on laws. Nowadays, a work cannot exist independently without the support of vast amounts of data. Clearly distinguishing the attributes of works generated by AI plays an important role. This not only promotes the improvement of the legal theoretical framework in the field of intellectual property rights under the impact of AI, but also protects the legitimate rights of authors. And it conforms to the trend of the law and big data keeping pace with modern society.

Keywords: Artificial Intelligence (AI); Copyright; Institutional Obstacle.

1. Introduction

Copyright is the exclusive right granted by law to creators over their original works, covering two major categories: rights and property rights. Copyright protection has a very significant impact on creators. According to Hegel's theory, the author's will or soul will permeate the work during the creative process, endowing the work with human purposefulness [1]. Therefore, many jurists use abstract concepts such as the author's "will" and "personality" to explain the ownership of copyright.

According to IDC data, the total global investment in Artificial Intelligence (AI) IT was 315.9 billion US dollars in 2024 and is expected to increase to 1.2619 billion US dollars by 2029. The above data clearly shows that the application of AI is reflected in all aspects of society, not only in manufacturing and industry, but also in the art creation industry. However, with the emergence of AI, works are no longer solely created by "humans", but are generated from a vast amount of data. These online works include but are not limited to various categories such as texts, images, audios, and videos. The coexistence issue between AI and copyright protection is inevitable. AI will to a large extent challenge copyright protection. In the case of Andersen et al. v. Stability AI Ltd, the number of image documents utilized by AI exceeds 5 billion. On the one hand, how should the copyright of works created with the participation of AI be determined? On the other hand, whether the existing regulations will have institutional obstacles in solving this problem, and what aspects should the provisions of copyright law take into account?

AI can conduct automatic learning based on data. After being trained with a large amount of text data, it can generate complex and seemingly intelligent texts [2]. Undoubtedly the emergence of AI-generated works has brought about challenges to traditional intellectual property protection. But it also means innovation and improvement in the field of copyright protection. This article aims to explore the copyright disputes related to AI-generated works and analyze the feasible countermeasures for such issues.

2. Dilemmas

The trend of in-depth application of AI technology in the field of content generation is irreversible. Its products have posed challenges to the traditional copyright system. These challenges not only stem from the differences between the characteristics of AI-generated content and the legislative logic of past copyright laws, but also become more complex due to the fact that industry practices, academic viewpoints and judicial precedents have not yet reached a unified consensus. All these factors directly affect the protection and regulation effect of the copyright system on creative achievements in the AI era. The core predicaments in the current use of copyright are mainly reflected in three key links: the application of regulations, the ownership of rights, and the determination of infringement. The following will analyze them one by one.

2.1 Dilemma in the Application of Copyright Regulations

The current focus of issues regarding AI-generated content mainly lies in whether there are systems and rules that can impose constraints on it. The existing regulatory framework does not fully align with the current development of AI. In this regard, some scholars believe that the content created by AI does not possess originality and is merely a product of algorithms and templates [3]. Another viewpoint holds that the content itself should be the basis, and it is sufficient to require the content to be original [4]. In this case, there will inevitably be conflicts in opinions regarding the compliance of such works. How we view the attributes of AI-generated content will affect whether the corresponding rules can be reasonably applied. This is a problem that needs to be continuously explored in the future.

2.2 The Issue of Ownership of Copyright

The difficulty in determining the ownership of the rights for AI-generated content lies in the identification of the author. In traditional copyright law, the owners are usually natural persons or legal entities. However, the works created by AI systems lack the consciousness and will of a human being, making it difficult to directly identify the author. Therefore, it is necessary to carefully confirm the authorship for such works. In the case of "DesktopMarketingSystemsPtyLtd v. TelstraCorporationLt" in 2002, the judge stated: The control that a person has over a software program can be regarded as control over the work. It is not inappropriate to consider this person as the author of the computer software work. Then in this situation, this person cannot be regarded as the author [5].

2.3 The Issue of Infringement Determination of Copyright

The content generated by AI relies on a vast database, which may result in the generated content inevitably resembling multiple works, thereby making the infringement targets complex and unclear, and preventing the determination rules from accurately identifying them. For instance, the lawsuit filed by The New York Times against OpenAI and Microsoft in December 2023, "the outputs from AI chatbots divert that traffic away from the paper and other copyright holders, the Times says, making it less likely that users will visit the original source for the information [6]".

The current theory of copyright law adopts a binary structure of infringement use and fair use. However, Professor Drassinower believes that the term "use" should first be divided into "works-based use" and "non-works-based use", and only then can the issues of infringement use and fair use be discussed within the latter. Therefore, this structure is unreasonable [7]. This means that, when a piece of content does not take the form of a work, it should not be regarded as something that can be regulated by copyright law, and thus the issue of infringement cannot be discussed. This situation can easily lead to the abuse of AI by large enterprises, resulting in the damage to the interests of the relatively disadvantaged tens of thousands of authors [8].

3. Strategies

"Creativity" was regarded as an important aspect of intellectual property law protection in the early days. Up to now, no country has given up the requirement for the "creativity" of works in relevant systems. However, the rapid development of science and technology has exceeded everyone's imagination. If legislators still face new problems with traditional thinking, it will inevitably lead to new predicaments and institutional obstacles. The following will start from four dimensions: legislative improvement, legality definition, infringement liability attribution, and infringement impact, and propose feasible response paths to address the copyright predicament brought about by AI-generated content. Based on the actual situation, corresponding feasible solutions will be formed.

3.1 Incorporate Works Generated by Artificial Intelligence into Legislative Considerations

Previously, Article 2 (2) of the German Copyright Act stipulated that "the term 'work' as used in this Act refers only to intellectual creations of human beings", and the Court of Justice of the European Union also required that the work should be an expression of the author's own "personality" and that the work should be "an intellectual creation of his own" [9]. However, given the extensive use of AI, if the legal provisions only stipulate the protection of works created by "humans", it will inevitably cause institutional obstacles in the future implementation of copyright laws. However, at present, AI is difficult to recognize the significance of its own actions, so it is hard to solve the problem through traditional fault liability determination. The legislative body can, based on existing relevant cases and in combination with classic precedents from various countries, listen to the opinions of the parties involved, sociologists and others, combine the regularity of the law with the people's demands for rights and interests, formulate corresponding policies and keep pace with The Times.

3.2 Clarify the Legitimacy of Works Generated by Artificial Intelligence

The complexity of data inevitably leads to difficulties in formulating and implementing copyright-related regulations. It is important to categorize works such as text, images, and videos independently generated by AI, and to explore under what circumstances and to what extent AI may constitute illegal acts or the legitimacy of its works for autonomous use.

Moreover, online platforms can set up protection for works that should be protected by copyright, requiring AI or its users to obtain the qualification to acquire and use the corresponding learning materials through legitimate channels. However, due to the extremely large number of existing online works in reality, it is impossible to require relevant platforms to reconfirm the copyright of each work. Therefore, attention can be paid to the retention and feedback of AI on usage records in the later stage. This not only facilitates the collection of evidence by copyright holders but also helps prevent users from infringing on others' Copyrights without their knowledge.

3.3 Clarify the Attribution of the Responsible Party in Infringement Cases

The determination of the subject of infringement in AI cases should take into account that If the infringement of legitimate rights and interests is caused by the imperfect design of AI itself or the failure to fulfill the obligation of explanation and warning, such responsibility should be borne by the designer or manager. However, if the damage is indeed caused by AI or the responsibility arising therefrom cannot be attributed to any operator, can AI be regarded as an independent legal subject in the process of safeguarding rights? Some scholars hold that AI is a special type of legal subject distinct from natural persons and legal entities. It does not yet possess ethical attributes but can exist as a subject that assumes property legal responsibilities [10]. However, the author believes that if AI itself is assumed to be the responsible entity, essentially, AI does not possess autonomous consciousness. If it is regarded as a legal entity capable of independently bearing responsibility externally, it may cause more difficulties in rights protection and lead to many unnecessary disputes over the determination of the responsible entity.

3.4 Timely Handle and Eliminate the Impact Caused by the Infringement

In traditional society, works that could be published or served commercially were often very few, because publication in traditional society often required investment and cooperation from enterprises. Only a small number of works can enter the market, and the authors protected by copyright are also limited to a minority group [11]. However, nowadays a large number of works are flooding the market. Many of these works are not creative but are still protected. In this case, it is highly inappropriate to view AI works from a single perspective as lacking subjective originality and to believe that the works they generate should not be protected or to neglect the occurrence of infringement issues. In the era of information explosion, the protection of copyright should be given even more attention.

In the context of AI creation, the author believes that the issue of rights ownership should highlight the instrumental status of AI in creation. In terms of rights ownership, the role of "human" plays a significant role. Relevant issues should take into account and distinguish between the behaviors of human creators and the role played by AI in the creative process. This can help clarify the division of liability in infringement cases. It should be noted that, generally speaking, developers and operators are rarely likely to actively hope for the occurrence of infringement results. Therefore, if one blindly pursues fault liability and makes developers bear all the responsibilities, it does not conform to the principle of fairness and is inappropriate. However, developers or users still have the obligation to provide appropriate compensation to the copyright owner and promptly delete and explain the generated content. But it should be noted that the prerequisite for assigning responsibility to developers or users should include that the copyright owner has substantive evidence to prove, On the one hand, the content generated by AI has substantial similarities with the original content of the copyright owner, on the other hand, due to the works generated by AI, the rights and interests of copyright holders are in fact infringed upon.

4. Future Development

Challenges and opportunities coexist. With technological advancements, the protection of copyright can shift from "post-event relief" to "pre-event prevention", and AI itself can also play a role in preventing such issues.

Human experts can make decisions on some professional issues based on the specific knowledge they have mastered, Some AI can learn the decisions of anthropologists, thereby mastering these detailed and specific knowledge, and further learn the strategies of deduction and logical reasoning ability, becoming "experts" in this field [12]. Further speaking, AI can solve some complex professional problems through learning. This ability can be applied in the fields where it is needed and even means that it can, in turn, solve the copyright infringement problems caused by AI. Moreover, in the development of AI, all countries should cooperate closely. Different countries can further establish compatible identification systems and traceability standards to achieve cross-platform and cross-border identification and management of AI-generated content, providing technical support for copyright protection.

5. Conclusion

This article focuses on the copyright protection issues of content generated by AI. The main focus of the article is the practical predicaments brought about by AI-generated texts, images, audio and video, etc. to the traditional copyright system. The predicaments mainly lie in three aspects: the application of regulations, the attribution of rights and the determination of infringement. It also proposes feasible strategies for legislation, compliance, responsibility division, and infringement response. The significance of exploring this topic lies in the fact that, from the perspective of the synergy between technology and law, AI applications have permeated the entire field of content creation. However, traditional copyright law takes "human intellectual creation" as its core logic, which is in essential conflict with the technical characteristics of AI-generated content. If the issue of

institutional adaptation is not resolved, it will create a "system obstacle" for copyright protection. From the perspective of rights balance, AI generation relies on massive amounts of data. It not only involves the risk of large enterprises abusing AI technology but also concerns the legitimate rights and interests of tens of thousands of disadvantaged creators. Only by clarifying rules can a balance be achieved between technological innovation and rights protection, which is in line with the trend of legal development in the era of big data.

At present, research lacks quantitative standards for determining the originality of AI-generated content, such as the extent to which human participation can be recognized as "originality". Moreover, discussions on cross-border copyright coordination are relatively shallow, merely calling for the establishment of compatible standards without analyzing the reconciliation paths for legal differences among various countries. Furthermore, the current research has not touched upon the issue of the "term of rights" for AI-generated content. Traditional copyright has relatively clear regulations on the term, while AI-generated content does not have an "author life cycle". All of the above are topics worthy of discussion and confirmation in the future.

The integrated development of copyright protection and AI is an inevitable topic in this era. By deconstructing and reconstructing copyright, not only can the copyright issues of AI works be better resolved, but also the difficult problems in the traditional copyright system can be answered more precisely. At present, although there are still certain difficulties in determining the legitimacy of works generated by AI, clarifying the subject qualification and infringement liability, and there are institutional obstacles, it does not mean that we should view the impact of AI on copyright protection with a negative attitude.

References

- [1] Hegel: Principles of the Philosophy of Right, translated by Fan Yang and Zhang Qitai, Business Press, 2011, p. 60. [in Chinese]
- [2] VAN DIS E A M, BOLLEN J, ZUIDEMA W, et al. 2023. ChatGPT: Five priorities for research[J]. Nature, 614(7947): 224-226.
- [3] Yinliang Liu: "On the Legal Status of Copyright for Artificial Intelligence Works", Political and Legal Affairs, No. 3, 2020, p. 5. [in Chinese]
- [4] Shan Sun: "The Dilemma and Solution of Copyright Protection for AI-Generated Content", Intellectual Property, No. 11, 2018, p. 65. [in Chinese]
- [5] Jani McCutcheon. 2013. The Vanishing Author in Computer-Generated Works: A Critical Analysis of Recent Australian Caselaw, Melbourne University Law Review, vol.36, no. 3.
- [6] HADERO H, BAUDER D. The New York Times Sues OpenAI and Microsoft for Using its Stories to Train Chatbots [EB/OL]. (2023-12-28) [2024-09-18]. <https://apnews.com/article/nyt-new-york-times-openai-microsoft-6ea53a8ad3efa06ee4643b697df0ba57>.
- [7] Abraham Drassinower. 2015. What's Wrong with Copying?. Cambridge: Harvard University Press, p. 87-88.
- [8] Intellectual Property Office of United Kingdom. 2013. Modern Copyright: A Modern, Robust and Flexible Framework.p.36.
- [9] Wikipedia. Richtlinie 2006/116/EG (Schutzdauer des Urheber-rechts und verwandter Schutzrechte) [EB/OL]. [2025-02-26]. [https://de.wikipedia.org/wiki/Richtlinie_2006/116/EG_\(Schutzdauer_des_Urheberrechts_und_verwandter_Schutzrechte\)](https://de.wikipedia.org/wiki/Richtlinie_2006/116/EG_(Schutzdauer_des_Urheberrechts_und_verwandter_Schutzrechte)).
- [10] Wenge Zheng: "The Responsibility Path for the Construction of Legal Subjects in Artificial Intelligence", China Applied Law, No. 5, 2022, pp. 225-226. [in Chinese]
- [11] Mark A. Lemley, "IP in a World Without Scarcity", New York University Law Review, Vol.90, No.2(May, 2015), p.460.
- [12] Linhart A, Schumacher P, Zech H. Schutz trainierter KI vs. Transparenzpflichten - Ein Spannungsverhältnis [J]. Zeitschrift für Urheber- und Medienrecht, 2024, 68(4): 237-243.