

The Perspective of Originality: Research on the Legal Attribute of Content Generated by Artificial Intelligence

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Abstract. With the strong rise of generative AI represented by ChatGPT, the issue of copyrightability of AI-generated content has become the focus of controversy in both theoretical and practical circles. The pivotal aspect in determining the legal status of AI-generated content lies in establishing a standard for originality. The current discourse within the theoretical community regarding the copyrightability of such content often revolves around the contrasting viewpoints of the "Dialectics of Negation" and the "Dialectics of Affirmation." By refining the criteria for assessing the originality of AI-generated content and evaluating their attributes through objective measures like "independent creation" and "modicum of creativity", demarcating the boundaries of creative expression, streamlining the creative process, and driving forward the expansion of the artificial intelligence industry. This endeavor is essential for enhancing legal clarity, fostering innovation, and navigating the dynamic landscape where technology and creativity intersect.

Keywords: Artificial Intelligence Generated Content, Generative Artificial Intelligence, Originality, Copyrightability.

1. Introduction

Currently, generative artificial intelligence (AI) is rising rapidly. Consequently, the copyrightability of AI-generated content has become an inevitable legal issue in the AI era. The focus of dispute between theoretical and practical circles lies in the determination of the legal attribute of AI-generated content. On August 15, 2023, the Interim Administrative Measures for Generative Artificial Intelligence Services (these Measures) came into effect. However, these Measures do not regulate the legal attribute of AI-generated content and derivative legal issues. There are also many controversies in judicial practice. For instance, in the case of Beijing Film Law Firm v. Baidu [1], the court held that although the content automatically generated by computer software is to some extent original, "created by natural persons" is still deemed a necessary condition for a work's creation in Copyright Law, thus denying its nature as a work. However, in the "AI-generated Image Copyright Case" [2], the court ruled that the picture involved in the case reflected the plaintiff's individual expression and had the elements of "originality", so it was a work and entitled to copyright.

In this regard, the current academic community mainly divides the claims on the copyrightability of AI-generated content into "Dialectics of Negation" and "Dialectics of Affirmation". "Dialectics of Negation" holds that AI-generated content does not possess originality and cannot be recognized as a work within the meaning of copyright law [3]. "Dialectics of Affirmation" holds that AI-generated content can meet the requirement of originality and its copyrightability should be affirmed. Thus, the choice of the originality standard directly determines the scope of works. The "originality standard" is the core of the identification of the legal attribute of AI-generated content. However, the current Copyright Law and the Implementing Regulations of the Copyright Law do not directly stipulate the legal meaning and standard of originality. Based on this, this paper discusses the legal attribute of artificial intelligence generated content from the perspective of originality, and defines the originality standard, so as to provide theoretical support for defining the copyrightability of artificial intelligence generated content.

2. Controversy Over the Copyrightability Of AI-Generated Content

The dispute over the copyrightability of artificial intelligence generated products has a long history. As early as 1965, the copyrightability of computer-generated products was put forward [4]. In 2022, the appearance of ChatGPT has triggered a heated discussion about the nature of AI-generated content, mainly focusing on whether the AI-generated content should be copyrighted. Among them, the negative view on the copyrightability of AI-generated products mostly focuses on the human participation factor in the concept of works, which has a strong "author-centrism" color. The relevant academic views can be further summarized as the theory of "natural person subjective" and the theory of "human personalized expression". The theory of "natural person subjective" holds that "the creation of a work by a natural person is the premise of the existence of a work" [5], thus fundamentally denying the copyrightability of AI-generated content. The theory of "human personalized expression" takes the production process or content of AI-generated products as the starting point, and believes that "artificial intelligence generated content is the result of applying algorithms, rules and templates" [3], so it does not meet the requirements of originality. Or else, artificial intelligence does not have the necessary creative intent to complete the work. Even if the artificial intelligence generated product has the appearance of a general work, it lacks the internal personality foundation, and still cannot constitute a "work" [6].

However, in "Dialectics of Affirmation", the dominant position is the "originality objectivity theory", which advocates that it does not consider "created by humans" as a necessary element. It focuses on the value of the specific content itself. That is, "as long as the specific content itself has a modicum of creativity and can meet the the public needs --meaning that it can offer the same benefits to the public as a human work--it should be protected by copyright as a work" [7]. Based on the authoritative interpretation of works by the World Intellectual Property Organization, some scholars believe that AI-generated content constitutes a copyrighted work as long as it is completed independently by robots, regardless of its use, value and social evaluation [8]. In response to the above view of "human personalized expression", some scholars have responded that only original expressions are protected by copyright law, and the creative process of a work is not included in the scope of protection, so whether AI-generated content is a work should not be judged by the creative process. Even if artificial intelligence is an "intellectual achievement" created by applying algorithms, rules, and templates, as long as the expression is original, it should not affect the judgment of the legal attribute of AI-generated content [9].

3. Criteria for Determining the "Originality" of AI-generated Products

3.1. Determination of Originality

3.1.1. How to judge the "uniqueness" of originality

At present, the prevailing view is that, the criterion of originality includes two parts: "uniqueness" and "creation". "uniqueness" refers to independent creation and originating from oneself. Based on this, there are two main controversies in the academic community's judgment of "uniqueness". First, whether "uniqueness" is excluded based on the integration of existing materials. The second is how to identify the observer of independent "creation". Among them, on the question of whether "uniqueness" rejects the integration of existing materials. Some scholars believe that the "creativity" of artificial intelligence generated products is the permutation and combination of existing logic and data modes, which still conveys the ideas of the programmer, and the emotions expressed also come from the data types and model algorithms provided by the programmer, therefore, this cannot be considered a work of independent creation [10]. However, this idea predates the advent of powerful generative AI such as ChatGPT. Therefore, it may not be accurate to use the term "permutations and combinations of existing logic and data patterns" to define the creativity of current AI creations. Some scholars also believe that independent creation does not exclude the absorption and integration of

existing works, "only requiring objectively identifiable differences between the new work and the original work [11]."

This paper argues that the requirement for the " uniqueness " of a work can be an independent creation from scratch, or an achievement created on the basis of the work of others. As long as there are objectively identifiable and not too subtle differences from the original work, the requirement of " uniqueness " can be satisfied. This view has also been supported in judicial practice, for example, in the "AI-generated Image Copyright Case" [2], the court found that the image in question "reflects a recognizable difference from the prior work". In addition, it embodied the plaintiff's personalized expression, so it was finally determined that the pictures involved in the case had the element of "originality".

3.1.2. What level of "creation" should reach in originality

"Creation" refers to a certain level of intellectual creation. However, there is controversy in the academic community about the level of "Creation". Some scholars advocate that the standard of creativity of artificial intelligence generated products should be raised higher than that of human works. The reason is that the current artificial intelligence has gone beyond the concept of mechanical extension and has the ability of "deep learning", and raising the standard of creativity can be matched by its higher creative ability and creative efficiency than humans [12]. Most scholars still advocate the traditional standard, the "modicum of creativity" [13], believed that raising the standard of creativity will increase the transaction and enforcement costs of the operation of the system, and the socio-economic benefits will be limited [14]. This paper argues that the recognition scale of originality of AI-generated products should be consistent with that of human works. At present, it is no longer easy to distinguish between AI-generated products and human works, which often have a similar appearance to the works, so the same criteria should be adopted. This would help to protect rights and interests by encouraging the identification of the true source of the work and avoiding the accumulation of "orphan works".

In judicial practice, the standard adopted by the court is also the " modicum of creativity ". In the case of Tencent v. Shanghai Yingxun Technology Co., Ltd., the court regarded whether there is a modicum of creativity as one of the factors in judging the originality of the article in question. It was finally determined that the content of the articles involved in the case reflected the creator's personalized arrangements and choices, met the modicum of creativity, and was original.

3.2. The determination of the originality of AI-generated products shall be based on objective standards

In recent years, whether to include "personality factors reflected in the creative process" in the evaluation criteria has been the biggest controversy surrounding the originality standards of AI-generated content [15]. "The subjective standard theory" argues that the birth of a work is based on the independent creative process of the creator. During the creator's process, the creation is stamped with the creator's mark, forming a unique style and characteristics that distinguish it from other works [16]. In other words, the author's unique personality and creative intentions should be reflected in the work. "The objective standard theory" believes that an object with the appearance of a work also has the potential to be a work. Independent and final works are the key and only criteria. That is, focusing on the work itself, regardless of the creator and the process [17].

This paper advocates adopting objective standards to independently evaluate the contributions of creators from the perspective of external expression. Analysis is conducted from the aspects of the creative process and creative intent.

First of all, from the perspective of the creative process, generative artificial intelligence mainly completes content generation through five processes, namely "Data Collection and Preprocessing - Model Training - Context Understanding - Text Generation - Output Tuning" [4]. The ability of "dynamic comprehension" enables generative artificial intelligence to make different interpretations of the same user prompts each time. The variables mainly come from the user's input history and the real-time fine-tuning of statistical regularities by the artificial intelligence algorithm after training.

This breaks the previous belief that "artificial intelligence will produce the same result based on the same prompts". At the same time, looking at the three stages of "conception-implementation-final draft" in the creation of works, user prompts are only in the conceptual stage of creation, with limited content, such as defining the theme and style of the work, which still belongs to the realm of ideas [4], playing a role more like a composition proposition. In the implementation and final draft stages, generative artificial intelligence also completes the selection and arrangement of content materials based on its internal workflow, forming a complete creative result. It can be said that generative artificial intelligence has achieved comprehensive and substantial control over the creative process. Furthermore, the evolution of artificial intelligence has led to a fading of the personality attributes of the work at the actual level, and the objective attributes of the work will not be constrained by the producer of the work.

Secondly, from the perspective of creative intent, the subject of the creation of AI-generated content is not a natural person, and cannot have the personality factors advocated in the traditional subjective judgment criteria. However, in the AI environment, the understanding of creative intention needs to be combined with the AI creation mechanism, and sticking to the traditional theory of subjective creative intention may violate the development and logic of reality [13]. On the one hand, the subjective creative intention itself has a certain level of abstraction and ambiguity, which is often difficult to directly explore in the process of "conception- implementation-final draft" of the creation of the work. Rather than exploring the ambiguous creative intentions of the creators, it is obviously more feasible to evaluate the appearance of the work directly through objective criteria. On the other hand, if it is necessary to examine the personality factors of AI-generated content, the user's prompt words and the human subjective value criteria incorporated into the training of the RLHF model can be regarded as the orientation of the creative intention of generative AI. These inherent personality factors do not affect the evaluation of the appearance of a work using objective criteria.

The increasing convergence between artificial intelligence generated products and human creations implies a fading of the personality of works at the level of reality. Simply denying the copyrightability of artificial intelligence generated products based on the identity of the non-natural person as the creator, blurs the boundaries of rights objects and rights attribution. The determination of the originality of artificial intelligence generated products should adopt objective standards, judging the object attributes of creative results through external expressions.

4. Artificial Intelligence-generated Products Meet the Requirements of Intellectual Achievements

Intellectual achievements refer to spiritual wealth or spiritual products created through intellectual labor. The original purpose of artificial intelligence was to imitate human intellectual activities. Human involvement in all aspects of AI development makes AI-generated content inherently a product of human intelligence. At the same time, AI-generated content and human intellectual achievements also have commonality in form and expression logic. Formally, in terms of the appearance of works, AI-generated content is no different from human creations. The linguistic symbols used are the same, and AI-generated content can be understood and evaluated by humans. In terms of expression logic, the content generation process of artificial intelligence is an imitation of human logical thinking, and the generated content has a certain level of intelligence, and integrates the subjective preferences of human beings, and is not the result of mechanically executing the algorithm template, and should belong to the intellectual achievements of human beings.

In reality, it is generally accepted that intelligence is a unique characteristic and essential attribute of human beings. However, with the development of artificial intelligence, this view should be revisited. Although there is an essential difference between the intellectuality of AI-generated content and that of human-created content, it is undeniable that the creative activities of artificial intelligence reflect a certain degree of intelligence, and can even surpass humans in some tasks. Therefore, the intellectual outcome attribute of AI-generated content should be recognized. Article 2 of the

Regulations for the Implementation of the Copyright Law of the People's Republic of China stipulates that the term "work" in the Copyright Law refers to intellectual achievements in the fields of literature, art and science that are original and can be reproduced in some tangible form. Based on this, the work attributes of AI-generated products can be recognized.

5. Conclusion

The continuous iterative evolution of artificial intelligence has made it difficult to distinguish between some artificial intelligence generated products and human works in terms of appearance without clearly identifying the source of the work. Denying the copyrightability of AI-generated products solely as creative subjects of non-natural persons may lead to the accumulation of a large number of "orphan works" and the chaos of using AI-generated products to pass off human intellectual achievements. By clarifying the original standards of artificial intelligence generated content, and examining the object attributes of it with the objective criteria of "independent creation" and "modicum of creativity", the boundaries of creation can be clarified, the order of creation can be maintained, and it is conducive to encouraging the identification of the true source of works and creating the market value of AI-generated content, thereby promoting the upgrading and progress of the artificial intelligence industry.

This paper focuses on the issue of the nature of works generated by artificial intelligence, and does not discuss their copyright ownership too much. In view of the diversified types of potential rights holders of AI-generated products, it is still necessary for the theoretical and practical circles to realize the reasonable allocation of rights on the basis of confirming the attributes of AI-generated products. In the future, the application scenarios of artificial intelligence will continue to be refined and enriched, the functional formats will be further upgraded, human-computer interaction will become more frequent and routine, and emerging intellectual property legal issues will continue to emerge. At present, the controversy and resolution of the authorization and confirmation of AI-generated content are an essential step in the growth of the artificial intelligence industry. It can be expected that in the process of the intelligent era, we need to build a more systematic intellectual property system and actively respond to the new challenges brought about by technological innovation.

Author Contribution

All the authors contributed equally and their names were listed in alphabetical order.

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