The Copyrightability of Artificial Intelligence Products

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Abstract. In recent years, with the rapid development of artificial intelligence technology, the definition of copyright rights has also been exposed, which has attracted widespread attention from all walks of life. As far as the existing research is concerned, the number of relevant studies on the copyright of artificial intelligence products is growing rapidly, the research content is also deepening, and the overall development trend is improving. However, it should be recognized that the existing research still has a vague boundary for the definition of its nature, and the relevant supporting legal system is not yet perfect. Therefore, this paper systematically examines the issues related to the copyrightability of AI products in the copyright law. This paper concludes that the copyright of artificial intelligence products should be defined by the core contribution of human beings, always adhere to the principle of the subject-object dichotomy, and curb reform based on the original judicial framework. Based on this, this paper puts forward the following suggestions: while continuously promoting the innovation of theory and system, further refining the definition standard, constantly improving the legislative and judicial construction, actively responding to the internationalization trend and actively giving the Chinese plan.

Keywords: Artificial intelligence products, copyright, copyrightability, originality.

1. Introduction

Since the birth of generative artificial intelligence such as ChatGPT, people can generate texts that are indistinguishable in form and content from the works created independently by human beings, relying only on inputting a few prompts and restrictions. Therefore, the issue of whether artificial intelligence products are protected by copyright law has aroused heated controversy in academia. In the case of Alibaba Group v. Mr. Li's unfair competition, Mr. Li's use of AI to write articles was suspected of making up false and untrue information to publish the infringing articles involved in the case for eye suction and drainage, increasing the number of fans, attaching to the plaintiff's goodwill, and improperly obtaining commercial interests. Mr. Li's defense denied that the article was suspected of civil infringement on the grounds that the article was generated by AI and did not involve personal subjectivity. Finally, the court denied that the article was a tool in nature, and its users had the greatest control over the products, so they should have the obligation to review, and did not recognize its defense [1]. It is not difficult to see that the core of this case is the definition of AI copyright, which also reflects the necessity of systematically sorting out the copyright issues of AIGC. Therefore, the interpretation of this issue is of great significance: From the perspective of AI industry at home, the discussion on this issue is the proper meaning of standardizing the healthy development of the industry. At the international level, even many countries under the same legal system have different attitudes towards copyright issues. The study of this issue can reduce the rule barriers in international cooperation and make social consciousness adapt to social existence. In view of this, this paper will start from the current mainstream academic point of view to explore the copyright of artificial intelligence products.

2. Analysis of the Concept of Copyrightability of Artificial Intelligence Products and Definition Criteria

Generally speaking, copyrightability means that a work is eligible for copyright protection because it meets the protection conditions of the copyright law. Therefore, the discussion on the copyright of

AI biology is ultimately whether it has the attribute of works. There are three elements of a work. First, whether it has originality; Second, whether it is replicable; Third, whether it has legitimacy. Although none of the three is dispensable, in the process of judicial practice, the most difficult to determine is the originality. Because the first two are external, objective and quantifiable standards, and can even be judged based on common sense, there are few disputes. Therefore, the following works only focus on originality. Artificial intelligence products have certain particularity compared with conventional works in the past. The domestic academia has the following three main views on whether they are copyrightable.

2.1. Not Copyrightable

Artificial intelligence products are only generated by basic instructions provided by human beings, and are not recognized as works because they cannot reflect personality and do not have the requirements of originality. Professor Wang Qian in the domestic field paid attention to this field earlier and put forward his own views in his published articles. By citing the case of a computer-generated telephone directory, it is pointed out that the content without originality should be excluded [2]. This shows that its judgment logic is to focus on the form of expression, and only judge whether it is consistent with the form of human works, without considering its formation process. Taking the generation process of artificial intelligence products as the core judgment basis, and combining with the drawing modification software, robot painting and NBA event news report writing, and other examples. It can be seen that the content generated by AI is essentially the result of the application of algorithms, rules and templates, and there is no personalized creation space. At the same time, based on Article 2 of *The Copyright Law of the People's Republic of China*, the subject of copyright rights is limited to natural persons, legal persons, and unincorporated organizations [3]. It is not difficult to determine that AI products do not constitute works and are not protected by copyright law. Therefore, artificial intelligence products cannot be recognized as works.

2.2. Copyrightable

In the process of receiving instructions, human beings participate in the process of artificial intelligence products, and the products are basically ideographic in the form of presentation, which can identify the attributes of their works. Some scholars in the existing research clearly support the copyright of AI products. For example, Professor Yi Jiming advocated in his article that AI products constitute works in the sense of copyright. It should be included in the protection scope of neighboring rights, and it is believed that the ownership of rights should be given priority to the agreement between the owner and the user, so as to stimulate the development of investors and technology [4]. According to Article 3 of the current regulations for the implementation of *The Copyright Law of the People's Republic of China*, creation is an intellectual activity that directly produces works, and the subject is not clearly defined as a natural person [5]. The legal person work system has explained that works are not only created by natural persons, and the copyrightability of the generated content cannot be directly denied because AI is not a natural person. The case that the music generated by the AI system after learning Bach's works is mistaken for Bach's original works by half of the professional audience has fully proved that the artificial intelligence products have the requirements of originality in form. Therefore, the objective evaluation standard is based on the principle of "sweating on the forehead" as the core. That is, there is no need to tangle with the main body of the creator. As long as the work meets the minimum requirements of creativity in the form of expression and is ideographic, it is considered to meet the requirements of originality. Therefore, artificial intelligence products meet the requirements of originality and have the attributes of works, and should be recognized as copyrightable.

2.3. Based on Specific Situations

As a product of the current new field, artificial intelligence products do not simply judge the attributes of their works based on past experience. It should be analyzed based on the specific situation

to determine whether it is original. In practical application, it only focuses on the authorship of human users, and gives original expression to users. When the AI user's choice meets the requirements of original expression, it should be recognized that the AI product conforms to the works in the sense of copyright law, and its user should be the author. Professor Jiangge takes historical experience as evidence, and takes the early camera as an example, which was also questioned to infringe human creation, and puts forward that AI and the camera are both tools [6]. This shows that the great contribution of tools does not mean that the contribution of mankind is insufficient. Copyright law should continue this logic, rather than setting the threshold for AI artificially. At the same time, the originality of AI products should be given limited protection. Professor Wuhandong is based on the logical chain of "practical observation, legal theory reconstruction, and system reconstruction". His view shows that the main controversy of artificial intelligence products in the field of copyright law is that although its text content is not easy to distinguish in appearance, it does not integrate human thinking and emotion in the process, and whether the situation of man-machine co-creation at the legal level is compatible with the subject-object dichotomy [7]. The view that artificial intelligence products break the traditional originality theory has emerged. The core judgment elements of their originality lie in whether human beings have set specific creative goals, whether they have input core materials and key choices, and whether they have made substantive optimization, such as screening and modification of the final results. If the above conditions are met, they should be given limited protection in specific scenarios.

3. Analysis on the Practical Path of Defining Copyrightability

The current research on the copyrightability of AI products has made many substantive breakthroughs. Several mainstream academic views have their own solid and reliable legal basis and are highly recognized. However, compared with the social background, there are still shortcomings, and some views are too absolute, which can be further improved.

3.1. Original Objectivism

The negative view adheres to the essence of legal principle; it reaffirms the essence of copyright law protecting human ingenuity, and avoids the law from being trapped by technical representation and deviating from the original intention of the system. The updated iteration of AI technology is immeasurable. If the ideological construction lags behind the social existence, it is bound to be unable to effectively adapt to the actual needs and promote social development. In March, 2024, the French Competition Authority announced that it would impose a fine of 250million euros on Google because Google's AI services used copyrighted works as training data and did not pay royalties to the right holders as promised. This shows that the right attribute of the current social artificial intelligence products should be confirmed, it can not meet the demands of all parties for the positioning of data training in the copyright law [8]. Therefore, it is difficult to meet the needs of society to completely deny its copyrightability.

3.2. Perspiration on Forehead

This view holds that as long as the generated content meets the requirements of the work in form and is basically ideographic, it should be protected by copyright. Although it is undeniable that it has great value in stimulating technology iteration and capital introduction, the key point of its foothold is the affirmation of the "sweat on the forehead" system. This system involves confusing the concepts of labor and creation, negating the core position of originality in the copyright law, and disintegrating the cornerstone of the copyright system, which undoubtedly deviates from the essence of the copyright law. Just as some scholars quoted the maxim "if you give countless monkeys typewriters, they will create Shakespeare's works" to express their views on originality [9]. Obviously, the current system has not been widely recognized by society and has the inevitability of iteration. This system design originated from the capitalist social legal system of the common law system, which is

significantly different from the socialist legal system with Chinese characteristics in the system design level.

3.3. On Human Contribution

The third view emphasizes the instrumental attribute of artificial intelligence and takes human contribution as the main basis for its definition. This not only realizes that the rapid development of artificial intelligence is an inevitable social trend, but also promotes the institutional adaptation; It also adheres to the principles of jurisprudence, abandons the question of whether AI is the most author, which is not the core, and pays attention to the core controversial points. Historically, there are also voices that photos are the product of technology, not the creation of the author. If it is identified as a supplement to art, it will break the definition of creation [10]. Later, in the judicial practice of courts in the United States and France, people sought human contributions in the thinking activities before the photographer pressed the shutter, and recognized the identity of photo works and the attributes of camera tools [11]. This kind of view is in line with the expectation of the critical period of AI technology outbreak. The principle of moderate protection can also attract capital investment, encourage technicians to make bold breakthroughs on the existing basis, and play an important role in promoting the development trend of AI.

3.4. Research on Practice Path

In order to comply with the identification of works in the copyright law, artificial intelligence products should adhere to the following principles: First, the content should conform to the legal work type, and the form of expression should be consistent with human creation. Non legal work types such as pure data collection and technical operation instructions should be excluded; The second is to grasp the core of human substantial intellectual contribution, which must reflect human independent choice and innovation in the process of generation, so that it is significantly different from the content of pure artificial generation; Third, it needs to be generated independently under the guidance of human beings. It is not allowed to copy existing works, and it has the lowest creativity. The results should be personalized and different, not a mechanical reproduction of existing content or algorithm output after training based on a big data model. Therefore, the core goal in the construction of supporting systems is to protect innovation and legitimate rights and interests, based on the key logic of human contribution, and adhere to the principle of "framework continuity while restraining change", so as to ensure that the system not only meets the essential requirements of copyright law, but also meets the needs of technological development.

4. Conclusion

To sum up, the related research on the definition of the copyright of artificial intelligence products is gradually deepening, and its essence is the balance between technological change and legal stability. However, there is still a dispute on a major core qualitative issue: whether artificial intelligence products have copyrightable lines.

Regardless of the differences between the different views on the above issues, it should take the core contribution of human beings as the main defining standard, always adhere to the principle of the subject-object dichotomy, and curb reform on the basis of the original judicial framework. In the future, it should further refine the definition standard of originality and avoid the conflict between legitimate interests and technical characteristics by limiting the copyright content of artificial intelligence products. At the international level, it should also seek common ground while preserving differences, change different attitudes, reach consensus through consultation, form a cross-border cooperation mechanism for the protection of the copyright of artificial intelligence products, and avoid legal conflicts hindering the global AI industry and cultural transmission.

It should still recognize that risks and opportunities coexist. It should balance human intelligent labor and AI innovation, avoid excessive extrusion of the living space of human authors by artificial

intelligence products, and ensure that the core purpose of copyright law is always to encourage human creative thinking, pay attention to the synergy of ethics and law, and ensure that technological development is consistent with the mainstream values of society. Through theoretical innovation and system improvement, it provides clear rights guidance for the development of artificial intelligence industry, makes the copyright system keep pace with the times, and realizes the core symbiosis of technological innovation and legal order.

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