

Research on The Copyright Law of Artificial Intelligence Generation

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Abstract

With the continuous development and innovation of science and technology in the current era, at this point, artificial intelligence has been able to generate all kinds of "works" like human beings, which has produced many new intellectual property legal issues in the field of artificial intelligence, which also put forward new legal challenges for its protection. What kind of protection should be given to artificial intelligence products, its copyright, the ownership of the rights of products is the issue of this paper. At present, the author believes that two preconditions should be made clear: first, the "works" of artificial intelligence products are regarded as copyright-protected works from its legal qualitative understanding; Second, the copyright of AI products should be owned by AI investors and users. On this basis, relevant legal protection mechanisms should be established to reduce legal disputes caused by artificial intelligence products.

Keywords

Artificial Intelligence Products; Copyright Protection; Protection Mechanism.

1. Introduction

With the continuous development and innovation of science and technology in the current era, artificial intelligence technology has also been expanded more widely. Recently, artificial intelligence has been continuously emerging for the public, such as ChatGPT, GPT4, as well as the domestic Baidu Wen Xin Yi Yan and so on. More importantly, the "works" generated by these artificial intelligence have been recognized by a large number of professionals, that it has a high professional level, and even triggered the ban of Chat GPT in various universities abroad, to avoid the situation of artificial intelligence writing papers. Due to the hysteresis of law, the copyright of China's Civil Code highlights the human-oriented system construction, and the copyright of artificial intelligence products was not considered at the beginning of legislation. Therefore, in the impact of artificial intelligence products on the existing legal system, whether artificial intelligence products are copyrightable, that is, whether artificial intelligence products belong to the category of "works" in the Copyright Law of the People's Republic of China (hereinafter referred to as "Copyright Law"), there is still no conclusion as to whether they constitute works. At the same time, whether artificial intelligence can become the "copyright owner" (that is, the creation subject) called in the "Copyright Law", as well as the ownership of the rights of artificial intelligence products are in urgent need of a new response from the "Copyright Law".

2. Overview of Artificial Intelligence Products and The Quality of The Works

2.1. The Concept of Artificial Intelligence Products

Artificial intelligence is composed of various scientific systems covering a wide range of fields, such as machine learning, computer vision, and so on. In general, a major goal of AI research is

to make machines capable of performing complex tasks that would normally require human intelligence. But different times and different people have different understandings of what this "complex work" means. However, the creation of artificial intelligence requires human beings as the first operator to make certain instructions and operations at the beginning, rather than being completely automated. As a result, humans are also an essential part of the process of creating artificial intelligence products. Artificial intelligence products are the contents extracted, integrated and analyzed by artificial intelligence technology on the basis of specific algorithms based on massive digital works, information and materials, and the formation of their contents depends on the application of artificial intelligence.

2.2. Characteristics of Artificial Intelligence Products

1.Appearance of the work. Human creations and artificial intelligence products are similar in appearance, and their expressions and basic forms are much the same. Of course, the creative process of the two is very different. On the one hand, the way of artificial intelligence creation through algorithms and programming can reach the same level as human creation to some extent, and it is even difficult for ordinary people to tell whether a work is produced by artificial intelligence or human creation.

2.independent creation. The first work generated by artificial intelligence requires human operation, but it no longer requires human participation after receiving the creation command. Artificial intelligence technology will automatically create works according to data analysis and algorithm model, such as deep learning technology in big data. The operator only needs to input relevant data into the database, and then the analysis and calculation program will be calculated and generated by the computer system.

3.Low cost of creation. In the past, computer technology and storage technology did not reach the maturity of today's society, so the cost of using artificial intelligence to create is very high. With the development of science and technology and the maturity of various technologies, the cost of using artificial intelligence technology to create is greatly reduced. In addition, the current database storage is cloud storage, users only need to spend low cost can get a huge database use, can use the cloud database to store data for data calculation and analysis processing has reached the user's purpose.

2.3. The "Copyright Law" on The Quality of The Works

Article 3 of the Copyright Law: "For the purpose of this Law, the term" works "means original works of force in the fields of literature, art and science that can be expressed in certain forms, including: (1) written works; (2) oral works; (3) works of music, drama, folk art, dance or acrobatic art; (4) works of fine arts and architecture; (5) photographic works; (6) audiovisual works; (7) graphic works and model works such as engineering design drawings, product design drawings, maps, schematics; (8) computer software; And (9) other intellectual achievements consistent with the characteristics of the work." According to the Law, a work protected by the Copyright Law should meet the following four requirements: first, it must be in the fields of literature, art and science; First, they must be original; Third, it is replicable; Fourth, it is an intellectual achievement. The scope and replicability of human creations and artificial intelligence products are not much different. Next, the author discusses whether artificial intelligence products are intellectual achievements and have originality. In terms of originality of works, artificial intelligence products are generated without copying or copying human works, and have the value of originality greater than or equal to that of human creations. At the same time, artificial intelligence is able to create independently based on self-learning and upgrading and through the materials provided by human beings. The creation process of human beings is essentially consistent with that of human beings. Therefore, the author believes that artificial intelligence can be identified as "intelligence" in the traditional sense. To

sum up, the author believes that artificial intelligence products can be regarded as "works" in the Copyright Law.

3. Different views on The Attribution of Artificial Intelligence Products

Idea 1: Ownership of AI products. Prof Yi believes that "the work belongs to the author" is a basic principle, but there are exceptions. If the copyright of artificial intelligence products belongs to the owner of artificial intelligence, the owner will make every effort to develop new works, promote the competition and development of artificial intelligence industry, and at the same time obtain economic benefits, it will also react on the further development of artificial intelligence, and bring new development opportunities to artificial intelligence technology. If artificial intelligence products do not belong to the owner, it will reduce the enthusiasm of AI owners to invest, at the same time, the enthusiasm of designers and developers will also be reduced due to the decrease of capital injection. To sum up, the copyright ownership of AI products should consider rules conducive to the development of AI technology.

Idea 2: the ownership of the copyright belongs to the users of AI. Typically, the owner and user of AI belong to the same citizen, legal or unincorporated organization. The exception to the separation of owner and user is when the owner of an AI application leases the application to others. As far as the current legislation is concerned, the country does not clearly stipulate the ownership of the copyright of artificial intelligence products. The author believes that the artificial intelligence products should be owned by the users in the above circumstances. On the whole, the generation of artificial intelligence products requires the user's operation and reflects the user's certain will, and the user will also invest a certain amount of time and money in the creation. On this basis, the relationship between AI and AI users and owners is relatively closer, and the ownership of rights to AI users is more beneficial to the spread and use of AI technology. To sum up, AI products should belong to AI users.

Idea 3: Ascribe to the AI designer. This view holds that AI technology is developed by programmers rather than generated automatically, so the copyright of AI products belongs to the AI designer. This view holds that AI products exist only when the designer provides the AI technology. However, the author does not agree with this view. Designers simply program to provide the program functions of artificial intelligence, and the products of artificial intelligence do not reflect the will and creativity of designers. Therefore, the author believes that the AI technology belongs to the AI designer, but the AI designer does not have the right to the AI product.

4. The Extraterritorial Research of Artificial Intelligence Products

4.1. Relevant Legislation in The UK

The United Kingdom is the first country in the world to make legislative norms on computer technology, the definition of the concept of computer works and the definition of authors. As early as in 1988, the UK promulgated the Copyright, Designs and Patents Law, which clarified the concept of computer-generated works, stipulating that "without the participation of human authors, Works independently created by computers "and stated that the author is" an individual who makes necessary arrangements and assumes responsibility for the works in the case that the works are generated by computers in the fields of literature, music, drama and other arts ". The British government began to prepare for the development of artificial intelligence in 2013, and the copyright law stipulates that the protection period of artificial intelligence products is the last day of 50 years from the date of its production, and the protection of artificial intelligence products is stipulated within the scope of copyright property protection, which establishes the legal status of artificial intelligence products in the UK

copyright law. To avoid the wavering of the main civil qualifications in the civil law system. The move bypasses the most controversial issue in the academic circle about the communication of thoughts and emotions in artificial intelligence products, and restricts it to those who "make arrangements and take responsibility". By directly stipulating that human beings are the creators of artificial intelligence products, it simplifies the problem.

4.2. Relevant Legislation in The United States

The Copyright Office made it clear in the 1973 edition of the United States Copyright Office Workbook that only works created by natural persons can be protected by copyright law. Subsequently, in a 1978 report issued by the Committee for the Application of Copyright in New Technologies (CONTU), the Copyright Office reiterated the Office's position on computer-generated content, saying that there was no need to make any adjustments to the current copyright system, and that computer programs existed only as tools to assist in creation. Therefore, artificial intelligence products not directly involved in the creation of the act does not qualify as a "work". Subsequently, the United States rejected the recognition of artificial intelligence products in the form of a report. This view was further clarified in the United States Copyright Office Outline of Practice released in 2014, which pointed out that the Copyright Office should not register products that are randomly generated by machines in the calculation process without the participation and responsibility of natural human authors. So far, there is no provision in US law for the content created by AI, and there is no relevant judicial practice case. However, as AI technology matures and its computational and interactive capabilities exceed initial expectations, the ability of AI to create independently without human involvement is within reach.

4.3. Relevant Legislation in Japan

As a country with rapid development of AI technology, Japan is also one of the few countries in the civil law system that respond to AI products and related issues. The current copyright law in Japan clearly points out that the purpose of copyright law is to protect the rights of authors and their related rights and interests, and to make contributions to the legitimate use of cultural products and cultural prosperity. It also clearly stipulates that the achievements of using creative methods to express thoughts and emotions in the cultural field can be called works and be protected by law. Like almost all civil law countries, Japan's copyright law also focuses on the author's personality and its extension. However, the latest revision of Japan's copyright law puts its focus on digital copyright protection. It can be seen that the number of products based on artificial intelligence is increasing, some of which have been recognized by more authoritative awards. Artificial intelligence products have caused a certain impact on Japanese society, especially the cultural industry. The rapid development of artificial intelligence in the cultural industry requires a special law to adjust and protect the relevant subjects and interests of the market. In 2016, Japan plans to enact relevant laws to include artificial intelligence and its products in the scope of adjustment and protection, and actively explore feasible measures to respect and regulate non-human objects of creation. In the report "Intellectual Property Promotion Plan" released by Japan, it is necessary to recognize the object status of artificial intelligence products and start soliciting opinions on relevant issues, in order to promote the enactment and amendment of the relevant individual laws in Japan. Instead of stipulating the content of AI products in its copyright law, Japan is trying to establish a registration system that is regulated by the anti-unfair Competition law, similar to the trademark law, and has revised laws such as the Anti-Unfair Competition Law to prohibit unauthorized use of AI to create content. From the perspective of social and economic development, Japan adopts the mode of anti-unfair competition law to maintain market order and pay attention to macro-control, actively regulates artificial intelligence technology at the legislative level, and actively promotes the development of artificial intelligence cultural industry. However, such institutional

arrangement does not respond positively to the impact of AI technology on intellectual property law system, but tries its best to maintain the original legal system, which is not conducive to the institutional exploration of AI technology and products.

5. The Protection Mode of Artificial Intelligence Products

5.1. Improving The Legal System of Artificial Intelligence Creations

To judge whether artificial intelligence creations can be protected in our current copyright law system, the key is to make clear whether artificial intelligence creations conform to the "works" standard defined in "Copyright Law". Professor Handong Wu believes that works in the copyright Law should be defined by enumeration and generalization. In the author's opinion, we can expand the interpretation of "other intellectual achievements conforming to the characteristics of works" in Article 3, paragraph 9 of the Copyright Law, and include all intellectual achievements that meet the criteria of originality and can be reproduced in a tangible form into the scope of works in the meaning of the Copyright Law. Therefore, as long as the artificial intelligence products meet both independent creation and certain originality standards, they can be regarded as works in the sense of copyright Law and protected by the copyright system constructed by Copyright Law. Compared with the enactment or modification of specialized laws, this measure can save legislative resources, and can effectively protect artificial intelligence creations in a short period of time, and ultimately conducive to the development of emerging artificial intelligence industries. While emphasizing the hard legal norm of regulating the copyright of artificial intelligence products through national laws, it is also necessary to give full play to the governance effectiveness of soft legal norms such as policies, declarations and industry practices. In contrast, soft law norms have the characteristics of flexibility, democratic legitimacy, technicality and interest balance, which can effectively make up for the defects of hard laws and regulations such as untimely and insufficient. As the legal protection path of artificial intelligence products is still in the exploratory stage, and the revision and interpretation of the current Copyright Law have to go through quite tedious legal procedures, the above characteristics of soft law make it particularly necessary to exert its regulatory effectiveness. Here, we can not only try to provide macro guidance for the protection of AI products by giving priority to the release of relevant national protection policies; It can also give play to the initiative and enthusiasm of the AI industry to form a consensus of industry standards and industry practices, so as to effectively protect the interests of the relevant subjects of AI products.

5.2. The Adjacency System Protects The Legitimacy of Artificial Intelligence Products

Chinese copyright law is a dual protection system composed of copyright and adjacent right. Compared with the aforementioned protection methods of "fictitious personality theory" and "job works" mode, it is more reasonable to use adjacent right system to protect artificial intelligence products.

First of all, it is more in line with the purpose of protection to protect artificial intelligence products by using neighbor right system. Copyright (in the narrow sense) is more inclined to protect original works created by natural persons, while adjacent rights tend to protect investment. The object protected by the right of adjacency is the joint property interests of the disseminator and the investor of the work which do not involve personal rights. As can be seen from the above, artificial intelligence cannot be given the status of legal subject according to the current legal system, and artificial intelligence is only a legal object existing as a tool. Therefore, most intellectual property rights related to artificial intelligence are about the distribution of interests, and few involve personal interests. The purpose and protection purpose of adjacent

right coincides with that the measure of legal protection of artificial intelligence products is the distribution of benefits. Therefore, the author believes that the adjacent right system should be applied to protect artificial intelligence products.

Secondly, in the narrow sense, the subject of copyright in most cases refers to the person who enjoys the right to literary works, artistic works and scientific works, which refers to natural person. Only in a few cases does the subject of copyright in the narrow sense involve legal persons and other organizations. For example, contract of trust, inheritance, acceptance of gifts, etc. The subject of adjacent right is broader than that of copyright in a narrow sense. German law stipulates that, in order to encourage the re-creation of works and the effective dissemination of works, persons who perform works, producers of films and TV plays, and persons who disseminate works through broadcasting shall be protected with the right of adjacency. The ultimate purpose of the protection of artificial intelligence products is to encourage the owners, users and developers of artificial intelligence to expand reproduction, and the core is not the protection of artificial intelligence itself. Therefore, from the perspective of legal subject, the use of adjacent right system to protect artificial intelligence products is in line with the current social development.

6. Conclusion

In today's society, the development of artificial intelligence is in the stage of weak artificial intelligence development. It seems that artificial intelligence has been out of the control of human beings and can create independently, but it is not the product of thinking in a strict sense to trace back to the source. The legal protection of artificial intelligence products is also to make up for the blank area of law. Whether the future development of science and technology will make human beings enter the stage of strong artificial intelligence depends on the degree of adaptation to the future social development. China should gradually determine the legal protection of artificial intelligence products according to the actual situation. Law is a thing with hysteresis, stability and predictability, and use the system of neighbor rights to protect artificial intelligence products. In line with the purpose and object of protection of artificial intelligence products is more appropriate, the content and time limit of protection is more reasonable, but also in line with the current stage of social development. Therefore, at the present stage, the best choice is to adopt the protection mode of neighbor right and the "Copyright Law" to protect artificial intelligence products.

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