

## Discussion on Copyright of Artificial Intelligence Producer

Xiaofeng Fan

Faculty of Law, Shanxi University of Finance and Economics, 696 Wucheng Road, Taiyuan, Shanxi 030006, China

514319683@qq.com

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**Abstract:** With the development of the internet, artificial intelligence has become the norm of life. They are active in various fields of social life. Not only so, artificial intelligence also frequently appears in the field of intellectual property, especially in the field of copyright, which poses a greater challenge. How should we respond? In recent years, scholars at home and abroad have made a lot of achievements on this topic, but there is no final conclusion on the work identification of artificial intelligence products. This paper focuses on the legal logic of whether artificial intelligence products can be recognized as works in the sense of copyright law, make corresponding analysis around the copyright of artificial intelligence products, analyzes the civil subject qualification of artificial intelligence products, and puts forward personal views on the ownership of artificial intelligence products copyright.

### 1. Introduction

With the development of Internet technology, artificial intelligence has become the normal life. More and more artificial intelligence appear in our production and life: driverless cars, unmanned factories and so on. At the same time, artificial intelligence products also frequently appear in the field of intellectual property. For example, Microsoft "Xiaobing", known as the "girl poet", created the poetry anthology "sunshine lost the glass window". The artificial intelligence deepdream developed by Google can generate paintings, and the paintings generated have been auctioned successfully. From the appearance form, there is no difference between the achievements created by artificial intelligence and the achievements created by human beings, and it is difficult to detect that they are not made by human beings; from the perspective of creative subjects, the emergence of artificial intelligence products has broken the cognition that previous works can only be created by human beings. The emergence of a large number of artificial intelligence products is constantly posing new challenges and problems to the existing copyright law system. When artificial intelligence products have a certain market size and market value, how should copyright law respond to this? It can be said that compared with the previous technological innovation, the challenge of artificial intelligence technology to copyright law is the most fundamental and comprehensive.

### 2. Overview of artificial intelligence products

#### 2.1 The meaning of artificial intelligence products

Artificial intelligence product is a kind of independent product which is derived from artificial intelligence robot and different from artificial intelligence machine itself. In the theoretical circle, there are many different appellations of artificial intelligence products, including artificial intelligence creations, artificial intelligence works and so on. However, the author thinks that these appellations are not appropriate to a certain extent: if they are called artificial intelligence creations, they have admitted that they are created by creation and have certain originality. If they are called artificial intelligence works, they are directly If we affirm that it constitutes a work in the sense of

copyright law, we will lose the significance of discussing whether it has originality and whether it constitutes a work. Therefore, the author thinks that the term "artificial intelligence product" is more accurate.

## **2.2 Types of artificial intelligence products**

According to the generation mode of artificial intelligence products, artificial intelligence products can be divided into artificial intelligence auxiliary products and artificial intelligence independent products. When artificial intelligence products are auxiliary products, artificial intelligence still acts as an auxiliary tool in the process of human creation. When AI products are self generated, AI can continuously train and learn algorithms from numerous cases and data. At this time, AI does not need to rely on hardware and pre-defined rules to create like traditional computers, but independently realizes creation. For the autonomous products of artificial intelligence, artificial intelligence at this time is not the extension of mechanical learning, but has the ability of deep learning.

## **3. The copyright of artificial intelligence products**

### **3.1 Works in copyright law**

*According to the regulations for the implementation of the copyright law*, works refer to the intellectual achievements with originality in the fields of literature, art and science and can be reproduced in some tangible form. Article 102 of the U.S. Copyright Act stipulates that works created for authors and fixed in tangible media, whether existing or later invented, so that they can be perceived, copied or otherwise transmitted directly or by mechanical devices, shall be protected in accordance with this law. Article 2 of the Japanese copyright law stipulates that a work is the original expression of matters or emotions in the fields of literature, art, science, art and music. It can be seen that originality is the core in the formation of works. There is no explicit provision on the elements of originality in China's copyright legislation. However, the mainstream view in academic circles holds that "independent creation" and "minimum creativity" are the two basic elements of originality.

### **3.2 Is artificial intelligence product a work**

#### **3.2.1 Analysis of whether artificial intelligence products constitute works**

##### **(1) Key issues in composing works**

Whether artificial intelligence products can be recognized as works in the sense of copyright law should be judged from the basic principles of copyright law, comprehensive consideration rather than simple identification. According to the relevant provisions of copyright law, the elements of a work include whether it has originality and whether it can be reproduced in tangible form. The most important consideration is whether the creation itself is independent and whether it has originality. Under the principle and framework of the current copyright law, the judgment of originality is often closely related to the personality of the creator, and the works are usually understood without the expression of human thoughts and feelings. At the present stage, that is, the era of weak artificial intelligence, artificial intelligence is still a creative tool. The process of its operation is not divorced from the algorithm preset by human beings as software developers. Artificial intelligence products are still the expression of human authors' ideas in essence. At this time, if the artificial intelligence products meet the "originality" conditions, they should still be recognized as non works and should still be protected by the copyright law.

##### **(2) The products of artificial intelligence have originality**

In the field of artificial intelligence, "independent creation" refers to "artificial intelligence can independently select, process, refine and optimize the required materials, and use different skills and methods to randomly create new and different contents". Artificial intelligence has a certain degree of autonomy and intelligence in the process of creating works, so artificial intelligence creations can

also reflect its "personality" selection and judgment. Although users and artificial intelligence may participate in the creation process at the same time, due to the small contribution of users to the final creation, and there is no possibility that the artificial intelligence can agree with the user's creation, they lack the foundation of CO creation. In addition, as far as the creation process of artificial intelligence is concerned, creation mainly refers to the intake and integration of existing works, but "independent creation" does not exclude this kind of creation process. The works created by artificial intelligence only need to have differences that can be objectively identified with the original works.

#### **4. Copyright ownership of artificial intelligence products**

##### **4.1 Ownership of copyright of artificial intelligence products**

###### **(1) Author of artificial intelligence products**

From the perspective of copyright ownership system, both copyright system and author's right system regard "copyright belongs to the author" as the general principle of copyright ownership, especially the recognition of natural persons as authors in author's right system countries. The author is a natural person directly engaged in creative activities, and creation is an intellectual activity in which the author directly produces literary, artistic and scientific works through independent conception and skill expression. It can be seen that other civil subjects other than natural persons can not directly engage in creative activities. In the era of artificial intelligence, the traditional principle of copyright ownership has been greatly challenged in dealing with the copyright ownership of artificial intelligence creations. From the legal point of view, artificial intelligence can only be used as the subject of legal control, not from the object of civil rights to the subject of civil rights. From the perspective of the basic relationship of civil law, civil law subjects enjoy civil rights, bear civil obligations and bear civil legal liabilities in the process of participating in civil relations, while artificial intelligence does not have the ability to perform civil obligations and bear civil liabilities. From the perspective of the most basic rights, artificial intelligence does not enjoy the basic rights of life and personality. The negative answer to the qualification of the civil legal subject of artificial intelligence makes it impossible for artificial intelligence itself to become the author of the contents of artificial intelligence products. If the ownership is determined according to this principle, although artificial intelligence can directly generate creations, it can not obtain copyright because it is not a natural person, and the programmer (designer) of artificial intelligence can not obtain copyright because he is not the "direct" creator of the creation, which undoubtedly makes the determination of the subject of copyright rights of artificial intelligence creations become more and more Difficulties. If the law ignores this vague state of power ownership, there will be a large number of "orphan works", which will lead to the failure of the incentive mechanism of copyright law to play its due role in the field of artificial intelligence creation.

###### **(2) The principle of identifying the copyright of artificial intelligence products**

Artificial intelligence is excluded from the scope of the author because of the dichotomy of subject and object. Since artificial intelligence cannot become the subject of copyright according to the traditional civil subject theory, who is the real subject of copyright? Although there are differences in the way of determining the copyright subject of artificial intelligence products in different countries, there are three stakeholders involved in the production process of artificial intelligence products, namely, the programmer (designer), the user or owner of artificial intelligence and the project investor. However, it has been ruled out that the AI programmer (designer) can obtain copyright. Therefore, the ownership subject of the copyright of artificial intelligence products is limited to the users or owners of artificial intelligence and project investors.

After determining the scope of rights and interests distribution, we should determine the ownership of copyright according to the established rules of copyright law, respect the autonomy of the parties, determine the ownership of artificial intelligence products based on the effective agreement between users and investors of artificial intelligence, and establish a set of rights core with investors as the core from the perspective of encouraging scientific and technological innovation and

property rights protection Legal protection system. In the case of no relevant agreement or unclear agreement, the author thinks that the copyright of artificial intelligence products should be attributed to investors. As for the distribution of interests between artificial intelligence users and investors, the author thinks that we should refer to the copyright ownership of special work. First of all, as a technology intensive industry, artificial intelligence needs a lot of human, material, financial and time input. In the process from development to commercial use, artificial intelligence has high investment risk and long payback period. If the copyright belongs to investors, it can get more benefits, thus stimulating their investment enthusiasm, increasing investment intensity, and then promoting the development of artificial intelligence In the development of artificial intelligence industry and social and cultural undertakings. Secondly, the content generated by AI users using AI technology actually meets the requirement of "mainly using the material and technical conditions of legal persons or other organizations". For example, the artificial intelligence composition platform ampercore launched by ampermusic, a leading enterprise in the field of artificial intelligence music creation, Whether it's an independent musician or a record company, with or without music experience or related skills, you can compose music by using this artificial intelligence composition platform of ampermusic. On this platform, users only need to select an emotion they want to express and the expected playing time of the song, and then click the "render" button. AI can write a song according to the type of song you choose in a few seconds. Obviously, the users of AI have not made substantial contributions to AI products. On the contrary, the AI composition platform has played an irreplaceable and substantial role in AI products. Therefore, when the users and investors of artificial intelligence have no agreement or unclear agreement on the ownership of the copyright of artificial intelligence products, the copyright of artificial intelligence products should belong to the investors. Of course, although the contribution of AI users to AI products is far lower than that of AI itself, we can not deny that AI users have also made contributions to AI products, and AI users may also contribute creative ideas to generate AI products that embody the feelings of natural people. Therefore, when the copyright belongs to the investor, the user should be given corresponding material reward or compensation, so as to enhance the user's enthusiasm for cultural creation.

## 5. Conclusions

The coming of the era of artificial intelligence not only affects and changes the way of human life and production, but also brings impact on the legal system, especially in the field of copyright. First of all, we should firmly adhere to the traditional civil subject system. In the current era of weak artificial intelligence, artificial intelligence is not enough to shake the core status of natural persons as civil subjects. Secondly, we should make clear that if the products of artificial intelligence meet the core conditions of "originality", they should be recognized as works in the sense of copyright law, and should not be considered as civil subjects because artificial intelligence does not have the qualification of civil subject The civil subject qualification of artificial intelligence and the work status of artificial intelligence products belong to different legal issues. The former does not naturally determine the latter. Thirdly, the copyright of artificial intelligence products is first agreed between the parties according to the principle of autonomy of will in civil law. When the agreement is unclear or there is no agreement, the copyright of artificial intelligence products should be determined by the parties The copyright belongs to the investors and gives corresponding material rewards or compensations according to the contribution of users to artificial intelligence products, so as to maximize the legislative purpose of copyright law.

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