

The Copyrightability and Ownership Analysis of Artificial Intelligence Creations

Yijun Xue¹, Zhide Zhou^{2*}

¹Law School, Guilin University of Electronic Technology, Guilin, Guangxi Zhuang Autonomous Region, China

²Intellectual Property School, Guilin University of Electronic Technology, Guilin, Guangxi Zhuang Autonomous Region, China

**Corresponding author:* Prof. Zhide Zhou, zzdlgy@163.com

Abstract: The rapid development of artificial intelligence inevitably poses an impact on the old legal system, while in the field of intellectual property, the copyright differences caused by artificial intelligence creations are more violent and urgent. In practice, there is a great disagreement on whether artificial intelligence creations belong to the object of copyright, and the debate on the subject of copyright is more intense. Starting from the purpose and object of copyright protection, the traditional concept of a work has been greatly revised, and “ideological” is no longer an important criterion for the originality of a work. Starting from the dichotomy of “thought” and “expression,” artificial intelligence already possesses “ingenuity” in creations, and the development of artificial intelligence also requires copyright protection of its creations. Compared with other entities, investors and transferees as capital contributors need more copyright protection in the early stage of industrial development, and they should also bear the relevant responsibilities in the process of creation of works.

Keywords: Artificial intelligence; Creation; The originality; Copyright

Publication date: November 2021; **Online publication:** November 2, 2021

1. Copyright analysis of artificial intelligence creations

1.1. Legal analysis of copyright of artificial intelligence creation

As a matter of fact, the copyright of artificial intelligence creation should be judged from the content of the work itself. Otherwise, it will fall into the pure “creation subject” theory, and thus get the conclusion that “because the creation is not a work of human beings, it is not a work of copyright.” In fact, if some artificial intelligence creations are labeled with “human pseudonym,” it is almost difficult to distinguish the difference. Although some scholars believe that this is only the rule of evidence production, it is more consistent with the identification mode of “should be” and “should be” to analyze whether they have the property of “copyright” first from the creation itself. According to Professor Wang Qian’s point of view, “when studying whether the content generated by artificial intelligence constitutes a work, the first question to be considered is whether the content in the form of expression constitutes a work in the case of the same creation from human beings ^[1].” The key issue arising from this is whether the content of artificial intelligence creation is comparable to that of human works, which is the issue of originality in the field of intellectual property. Originality is the focus of controversy on whether artificial intelligence creations are embodied as works in the field of copyright.

1.1.1. “Works” in copyright

According to China’s current copyright law, a work refers to an intellectual achievement that is original and can be reproduced in a tangible form in the field of literature, art and science, while creation refers to an intellectual activity that directly produces literary, artistic and scientific works ^[2]. Therefore, originality has become an important criterion to judge the creation of artificial intelligence. Opponents have long maintained that the work is the product of an “algorithm,” the result of a computer’s calculations based on input data, and that the process is no more creative than a machine’s quantitative production, let alone an intellectual achievement, and thus no different from an orangutan taking a picture with a camera. In this case, if combined with the need for the work to reflect the unique spirit of the author, then it can be effectively stated that “artificial intelligence creation” is not copyrighted. But this mode is based on a principle, that is, the work should emphasize the content of the “unique thought,” condensation of the unique thought essence. Traditional literature believes that a work contains the author’s feelings, personality, and especially the author’s thoughts. The criterion for evaluating the greatness of a work is that it is full of thoughts. A work that makes no sense is always unappealing, while an excellent work is always a collection of the author’s most essential ideological achievements.

However, with the development of The Times, the definition of works has undergone great changes, and whether “unique thinking” is the key factor to identify works has been questioned by more and more people. In the field of copyright, is it necessary to have copyright protection only if the works contain ideas? From the perspective of the development of intellectual property rights, the definition of works has undergone significant changes, the importance of “unique thinking” has been constantly weakened, and the evaluation of works has changed from “author-centered” to “production-centered”. For readers, the charm contained in the works is generated by readers in their hearts. “A thousand readers may have a thousand Hamlets.” The reader does not read a work in order to understand the only original “thought” that comes from the author in order to achieve full marks in the reading comprehension exercise. On the contrary, readers are in the pursuit of self-perception, which is the edification of their feelings after reading. From this point of view, there is no objective standard, no method, and no need to identify the “ideological nature” of a work.

In fact, at the beginning of photography, almost no one can realize the difference of photos, just think of it as a copy of the original, there is no “originality,” but soon was found to be unique photography. To bring it under protection. The emergence of new technologies and the change of The Times have broadened the concept of “work,” and the creation of artificial intelligence has taken the form of “work.”

1.2. Analysis of “originality” of artificial intelligence creations

Some scholars believe that the feelings brought by artificial intelligence works are only the result of the imitation of the previous template with a certain emotional orientation in the calculation process, and its essence comes from the images and imagination projected by the readers themselves to the material of a previous work imitated by the corresponding “works ^[3].” This creative process is in essence a calculation, which does not meet the requirements of originality. This view holds that artificial intelligence lacks intellectual creation and is merely imitation and calculation, and that readers’ feelings are actually based on the impressions projected by previous works. As a matter of fact, when we read, we will inevitably think of the previous works. It is because of the different experiences of each person before, the different reading will make different readers. We don’t have a feeling for the same type. It’s the unique combination of words and musical notes that touches people’s hearts. Intellectual activity is not necessary for copyright. A child’s essay can be a work, so can the creation of artificial intelligence.

1.3. The necessity of copyrighting works

In practice, a large number of works belong to a type of works with extremely similar styles, and the phenomenon of “similar imitation” exists in the field of creation. A work will inevitably be influenced by previous experiences, and objectively there is a need for these works. Just as it is almost impossible for a piece of music to have all the unique and amazing melodies, it is inevitable that there will be some more normal melodies among them. For this part of the demand, just artificial intelligence can meet ^[4]. Some argue that the sheer volume of artificial intelligence that can be created reduces the value of individual works and thus eliminates the need for copyright protection. This view clearly confused “the increase in labor productivity leads to the decrease in the value of individual products” with “whether artificial intelligence needs copyright protection.”

In fact, artificial intelligence can reduce the cost of some works. By increasing the quantity of supply, the price of similar products in the market will drop, and eventually the market will be squeezed for the same “human works,” but this does not mean that the creation process of artificial intelligence does not need to be protected. On the contrary, the current investment in the AI market depends on the capital’s conviction of future returns, and AI creations are regarded as the guarantee of future returns by investors. On the one hand, we are enjoying the convenience brought by artificial intelligence. On the other hand, we turn a blind eye to the high investment behind artificial intelligence, which is inappropriate for the purpose of protection of production rights.

2. Ownership analysis of artificial intelligence creations

2.1. “Feasibility” analysis of subjectivization of artificial intelligence

Although artificial intelligence is gradually attached importance to and even endowed with personality in the national society, compared with the corporate body with independent property, artificial intelligence has congenital deficiency.

First of all, the corporate body has its own independent property and its own executive organization to perform its duties and exercise its powers under the framework of the articles of association. What is more critical is that the legal person can assume civil liability and even criminal liability with its own funds. The provisions of criminal law on unit crime can also regulate legal person. Artificial intelligence, on the other hand, cannot participate in economic life like a legal person even if given “personality rights ^[5].” Even though some people propose to set up a “special fund” dedicated to artificial intelligence to give it property rights and human resources support, it is still insufficient for it to bear civil liabilities independently. The responsibility must be carried out on the “legal person” and natural person, and artificial intelligence is only the intermediary in name. Artificial intelligence cannot operate by itself like a legal person. If a group is set up that includes artificial intelligence, in fact, it is just a separate social group to assume responsibility, which is not different from other groups. Artificial intelligence is just a name. In practice there is the concept of computer creation in the field of intellectual property in the UK, but it is only the author in name, the real copyright is still the person who made the investment. Therefore, from the point of view of feasibility, artificial intelligence cannot become the main body.

2.2. Copyright ownership of artificial intelligence creations

At present, there is a wide range of opposition to artificial intelligence as the copyright subject. Therefore, some scholars regard artificial intelligence as the nominal author, but actually endures its rights to the operators who initially input the algorithm into artificial intelligence, which is called “the legal transfer of rights.” It is still debatable whether it is necessary to set up the right subject only nominally. Therefore, other scholars directly abandoned the name of artificial intelligence and used the broad sense of “employer-employee” to compare artificial intelligence creation to “employee’s job behavior” so that employers can

directly obtain intellectual property rights. Some scholars also put forward that investors should acquire the copyright by analogy with “the producer obtains the film copyright.”

2.2.1. Artificial intelligence creations belong to investors

At present, artificial intelligence is developed with the investment of huge amount of capital. It is for the purpose of protecting copyright, and it is understandable to give investors the status of producer. On the one hand, from the perspective of necessity, it is feasible to endow investors with a dominant position. They are the direct investors and, on the other hand, the initial decision makers for the creation of AI. Some scholars believe that the importance of division of labor in the creation of artificial intelligence should be distinguished, and that the ultimate operator who makes the “intellectual contribution” is the copyright subject. However, this division of labor is not conducive to the development of the AI industry. The reason why investors invest in the industry is in fact for the sake of future profits. If the benefits are given to operators, the investors who provide human and material support will be ignored, resulting in the damage to investors’ rights and interests, and then the industry will shrink. Like the film industry’s producer system, specific industries require specific accountability. On the other hand, from the perspective of feasibility, investor responsibility system is more feasible. Investors determine the direction of AI research and the start of the creative process. From the perspective of promoting the prosperity of works and protecting the legitimate rights and interests of authors, there is nothing wrong with protecting the rights and interests of investors, and it is also in line with the development trend of intellectual property and artificial intelligence. At the same time, investors can also bear the ultimate responsibility for the creation process of artificial intelligence. For the possible copyright disputes, only investors with this special status can effectively deal with them ^[6].

2.2.2. Ownership of artificial intelligence creations after “transfer”

But there is also a difference between the work and the film. The production process of the film is unique, while the creation of artificial intelligence is uninterrupted, that is, artificial intelligence is transferable. If according to the concept of “fruits” in the civil law, the assignee can obtain the corresponding fruits of the products after the transfer of possession and thus the intellectual property rights. But intellectual property rights and the concept of fruits in civil law are different, after all. Although intellectual property rights do not transfer with property rights, they should be targeted at the intellectual property rights of artificial intelligence itself, not the works produced by artificial intelligence. From this point of view, the parties have reached agreement on the transfer of artificial intelligence, and it should be recognized that both parties have agreement on the ownership of products after artificial intelligence. The reason why the assignee buys artificial intelligence is to pursue the copyright income later.

3. Artificial intelligence and copyright protection

3.1. Infringement in artificial intelligence creation

Some people believe that the copyright of artificial intelligence creations will activate the “orphan products.” After all, artificial intelligence can process information faster than human brains, and will “transform and utilize” some dust works. However, whether infringement is involved in the process of massive utilization ^[7]. On one hand, the learning ability of artificial intelligence is relatively strong, and its learning objects will be far beyond the cognition of human beings, so whether the rights and interests of these learning objects are involved are damaged. On the other hand, the learning process of artificial intelligence is more subtle. For the finished product, it may just borrow a factor, but whether it is marked as “reference object” or not. In extreme cases, even the person being infringed may not know. Especially in the current era of information explosion, a large number of works are flooded. For traditional authors, it is difficult to find

infringement, let alone some “orphan works.”

Therefore, the principle of “fair use” can be introduced to artificial intelligence creation to solve the problems that may arise in artificial intelligence creation. But even so, AI should not abuse this principle and take liberties with other people’s creations. During the development process, developers should give the AI a sense of the rules and make it mark the source of the work. In the case of commercial adaptation, which relies heavily on the original work, the consent of the original author should be sought, and the “author” who cannot be contacted should also be specially noted. If the artificial intelligence itself is altered or the infringement is caused by the third party’s behavior, the “direct manager” shall take the responsibility first with reference to the relevant provisions in the Tort Liability Law, and then the relevant subjects such as the developer and the third party of the infringement shall be held liable. Managers themselves should also fulfill the duty of prudent management.

3.2. Artificial intelligence creations are infringed

Artificial intelligence itself may create a large number of “sleeping works” as well as awakening “sleeping works.” Compared to humans, the speed of their creation has improved dramatically. A lot of it is produced, and how to protect its copyright. Creations by investors or users using artificial intelligence are bound to be different from those by normal human writers. Whether investors have the energy or ability to keep track of the protection of all works is worth considering.

Regulators could even set up a market for AI works to be reported by managers with disposal powers. People with related needs have a demand for the use of a certain work and can trade through the market. For the infringement of the listed works, the regulatory authorities and the actual owners have the right to pursue responsibility. For a large number of works, it does not have the value and significance of protection. Investors should be able to apply the principle of “fair use” to some of the dusty works, and put some of the works on the market for social fair use, so that the resources of the works are not wasted.

4. Conclusion

From the perspective of historical development, the meaning of works changes with the development of The Times. In this era of information explosion, the assessment standard of the previous works is too strict for the author’s painstaking efforts, such as “ten years of grinding a sword.” The standard of works has changed greatly, and the pure “authorism” has been transformed into “authorism.” Therefore, the “dichotomy of thought and expression,” “independent completion,” “minimum creation” and other re-interpreting methods of “works” have emerged. The creation of artificial intelligence has the characteristic of “originality,” and then has the basis of copyright. From the perspective of the development of intellectual property rights at the present stage, giving investors copyright conforms to the law of development and can better promote the development of artificial intelligence. The copyright of its creations also meets the realistic demand.

Funding

Guilin University of Electronic Science and Technology of China internet plus Intellectual Property Protection Research Think Tank (Guidian Xue [2019] No.3); Guangxi science and technology development strategy research project (GuiKeZL18077014).

Disclosure statement

The author declares no conflict of interest.

References

- [1] Wang Q, 2017, On the Qualitative Analysis of Artificial Intelligence Generated Content in Copyright Law, *Law Science (Journal of Northwest University of Political Science and Law)*, (05):149.
- [2] Refer to Article 2 and 3 of Copyright Implementation Regulations.
- [3] Cao B, 2019, Analysis of Intellectual Property Attributes of Artificial Intelligence Products, *Comparative Law Research*, (04):147.
- [4] Huang Y, Si M, 2018, Rights Ownership of Artificial Intelligence Generated Works from the Perspective of Fruit, *Journal of Henan Normal University (Philosophy and Social Sciences Edition)*, (04):23-25.
- [5] Liu Y, 2017, A Preliminary Study on the Protection of Artificial Intelligence Products by Copyright Law, *Intellectual Property Rights*, (09):44-50.
- [6] Sun S, 2018, The Attitude of Artistic Content Generated by Artificial Intelligence, *Journal of Shanghai University of Political Science and Law*, (05):84-88.
- [7] Long W, 2019, “Research on the Creative Essence of Works and Creative Issues of Artificial Intelligence Products,” published in “*Electronic Intellectual Property*,” 5(05):6-9.